

***ELECTRONIC FILING***

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

NORMAN YAMAMOTO ET AL.

Serial No. 09/921,734

Filed: August 3, 2001

For: FLEXIBLE SEE-THROUGH  
BOUND DOCUMENT ASSEMBLY

Examiner: Mark T. Henderson

Group Art Unit 3722

Docket No. AVERY-67231

February 10, 2005

Los Angeles, California 90045

**SUPPLEMENTAL APPEAL BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

A Notice of Appeal from the Office Action of July 14, 2004 was filed on October 12, 2004. This Supplemental Appeal Brief is responsive to the Notice of Non-Compliant Appeal Brief (37 CFR 41.37) dated July 11, 2007. Reconsideration and a decision on the merits is respectfully requested.

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## **I. REAL PARTY IN INTEREST**

The real party in interest is AVERY DENNISON CORPORATION. This application was originally assigned by the inventors, NORMAN YAMAMOTO and ADAM BRATTER, by an assignment executed August 8, 2001, which was recorded by the Patent Office on October 4, 2001, beginning at reel 012238, frame 0072.

## **II. RELATED APPEALS AND INTERFERENCES**

None.

## **III. STATUS OF CLAIMS**

This patent application has 19 pending claims. Of the originally filed claims, Claims 2-4, 7-10, 13, 18, 20, 23 were canceled. Pending Claims 1, 5, 6, 11, 12, 14-17, 19, 21, 22, and 24-30 were finally rejected in an Office Action dated July 14, 2004.

## **IV. STATUS OF AMENDMENTS**

The Amendment of March 30, 2004 has been entered. In that amendment, claims 1, 5, 11, 17, 21, 22, 24 and 29 were amended. Claim 30 was added.

## **V. SUMMARY OF THE INVENTION**

In accordance with one illustrative embodiment of the invention, a flexible binder assembly has a transparent flexible front cover with a frame in the form of a coating. On the inside of the front cover an inner plastic pocket is provided, and it is firmly secured to

the front cover along two edges, with the two other edges of the pocket being free so that visual material may be readily inserted into the pocket. Typically, the assembly includes construction arrangements for holding the inner pocket firmly against the transparent cover over the entire open area of the frame.

The sheet material for the front cover pocket is preferably fairly thin as compared with the cover material; for example the covers may be formed of polypropylene or a blend thereof, in the order of 17 mils thick, while the sheet plastic material for the pocket may be in the order of 7 or 8 mils thick. The pocket is preferably bonded to the inside of the cover just outside the frame, and is slightly larger than standard 8 1/2 x 11 inch or A-4 paper. The pocket may be secured along only two edges, the bottom and outer edge, away from the intended binding location, or it may be secured on three sides excluding the top. With this latter construction, it may be cut near but spaced from the binding from the top to near the bottom adjacent the binding. With either construction the sheet bearing the visual material may be readily slipped into place, and the latter construction will have the residual edge of the pocket overlapping the inner edge of the visual material. The pocket may also be secured to the front cover on three sides, with the flexibility of the covers permitting easy insertion of the visual material through the open side, which may be on any side of the pocket.

An image of the cover of the binder, showing the frame, or merely an outline or template of the printable area of the frame, may be provided on a computer monitor, and the user may introduce suitable visual material into the area within the frame, and then print out the desired image for insertion into the pocket.

The binder may include additional tabbed index sheets, opaque or optionally translucent or transparent, permitting the use of additional visual display sheets to introduce each section of the bound material.

The rear cover is also flexible and may be provided with a partial pocket extending for less than half of the area of the rear cover; and this partial pocket may be formed from an over-size sheet of the back cover sheet material folded to form the rear pocket. The rear pocket may be heat formed, or folded using a score cut and pressure, and glued or adhesively secured to form the pocket. The rear pocket sheet material may optionally be provided with cuts for holding the corners of a business card or the like.

The rear cover is preferably printed with a dark colored coating, preferably matching the frame on the front cover, but the inner rear partial pocket is preferably transparent so that its contents may be viewed.

## **VI. ISSUES ON APPEAL**

### **A. THE EXAMINER'S REJECTIONS**

The Examiner rejected claims 1, 11, 16, 21, 22, 25, 26, 29 and 30 under 35 USC 103(a) as being unpatentable over Yamamoto et al. (6,206,602) in view of Walters (5,118,137). The Examiner indicated that Yamamoto et al discloses in Fig. 1 and 2 a binder assembly and system comprising: front and rear plastic covers, wherein the front cover is transparent with an opaque peripheral frame coating defining an open area, wherein the covers are secured together at a binding and an inner transparent pocket having approximately the same dimensions as the cover with a size coextensive with the open area, secured to the inner surface of

the front cover at a pocket-to-cover bond zone, wherein the bond zone is free of expansion structure. Construction arrangements (heat bonding of the plastic pocket sheet (26) to the cover (12) for holding the pocket against the cover over the entire open area of the frame) and inner, outer, top and bottom edges, permitting quick insertion of visual material information from a top of the inner areas of the pocket.

However, notes the Examiner, Yamamoto et al does not disclose a binder assembly, wherein the inner pocket is secured along its outer edge and its bottom edge, but is free and unsecured to the cover at the top and inner edges, and wherein the inner pocket is formed of a sheet secured to a binding and cut along the binding.

The Examiner indicates that Walters discloses in Fig. 5 and 6, a binder having an inner pocket dimensioned at any desirable size and is secured along its outer edge and its bottom edge, but is free and unsecured to the cover at the top and inner edges. It would have been obvious, says the Examiner, to modify Yamamoto et al's binder assembly with a pocket only secured at its outer and bottom edge as taught by Walters for the purpose of allowing easier insertion of material in the pocket.

In regards to Claim 16, the Examiner indicates that it would have been obvious to construct the rear cover the same as the front cover for the purpose of disclosing additional visual displays. In regards to Claims 25 and 26, that the inner pocket is formed of a sheet secured to a binding and cut along the binding

does not structurally limit the claim. Furthermore, the Examiner indicates, the construction arrangements of Yamamoto et al. are capable of holding the inner pocket firmly against the cover.

The Examiner further rejected claims 1, 11, 16, 21, 22, 25, 26, 29 and 30 under 35 USC 103(a) as being unpatentable over Yamamoto et al. (6,206,602) in view of Buxton (2,161,015). Buxton, the Examiner argues, discloses a binder (wherein the binding mechanism is the stapled margin (36')) which binds a stack of pad sheets, and is fastened to the cover. The Examiner indicates that the cover has an inner superposed pocket dimensioned at any desirable size and is secured (stitched) along its outer edge and its bottom edge, but is free and unsecured to the cover at the top and inner edges.

The Examiner further rejected claims 5, 15, and 19 under 35 USC 103(a) as being unpatentable over Yamamoto et al. (6,206,602) in view of Wilson, Wyant and Koba (6,222,947). Claims 12, 14, 17, 27 and 28 were rejected under 35 USC 103(a) as being unpatentable over Yamamoto et al in view of Walter and further in view of Wyant. Claim 24 is rejected under 35 USC 103(a) as being unpatentable over Yamamoto et al in view of Walters and further in view of Koba.

## **B. THE ISSUES FOR DETERMINATION**

In view of the Examiner's rejections, Appellant respectfully submits that the issues on appeal are as follows:

1) Whether, with respect to claims 1, 11, 16, 21, 22, 25, 26, 29 and 30, one of ordinary skill in the art at the time that the invention was made would have combined Yamamoto et al. (6,206,602) with Walters (5,118,137) to form a binder assembly as claimed, wherein the assembly includes construction arrangements for holding the inner pocket firmly against the transparent cover over the entire open area of the frame.

2) Whether, with respect to claims 1, 11, 16, 21, 22, 25, 26, 29 and 30, one of ordinary skill in the art at the time that the invention was made would have combined Yamamoto et al. (6,206,602) with Buxton (2,161,015) to form a binder assembly as claimed, wherein the assembly includes construction arrangements for holding the inner pocket firmly against the transparent cover over the entire open area of the frame.

## **VII. GROUPING OF CLAIMS**

For purposes of this Appeal only, claims 1, 11, 16, 21, 22, 25, 26, 29 and 30 stand and fall together.

## VIII. ARGUMENTS

Regarding the various prior art rejections, including claims 1, 11, 16, 21, 22, 25, 26, 29 and 30, they all basically involve the combination of Yamamoto and the Walters and/or Buxton patents. With respect to the Walters patent, to bring out the significant shortcomings of this proposed combination of references, we are attaching as Fig. 1, as set forth below, a print of Fig. 5 from the Walters patent with the frame of the Yamamoto patent super imposed.

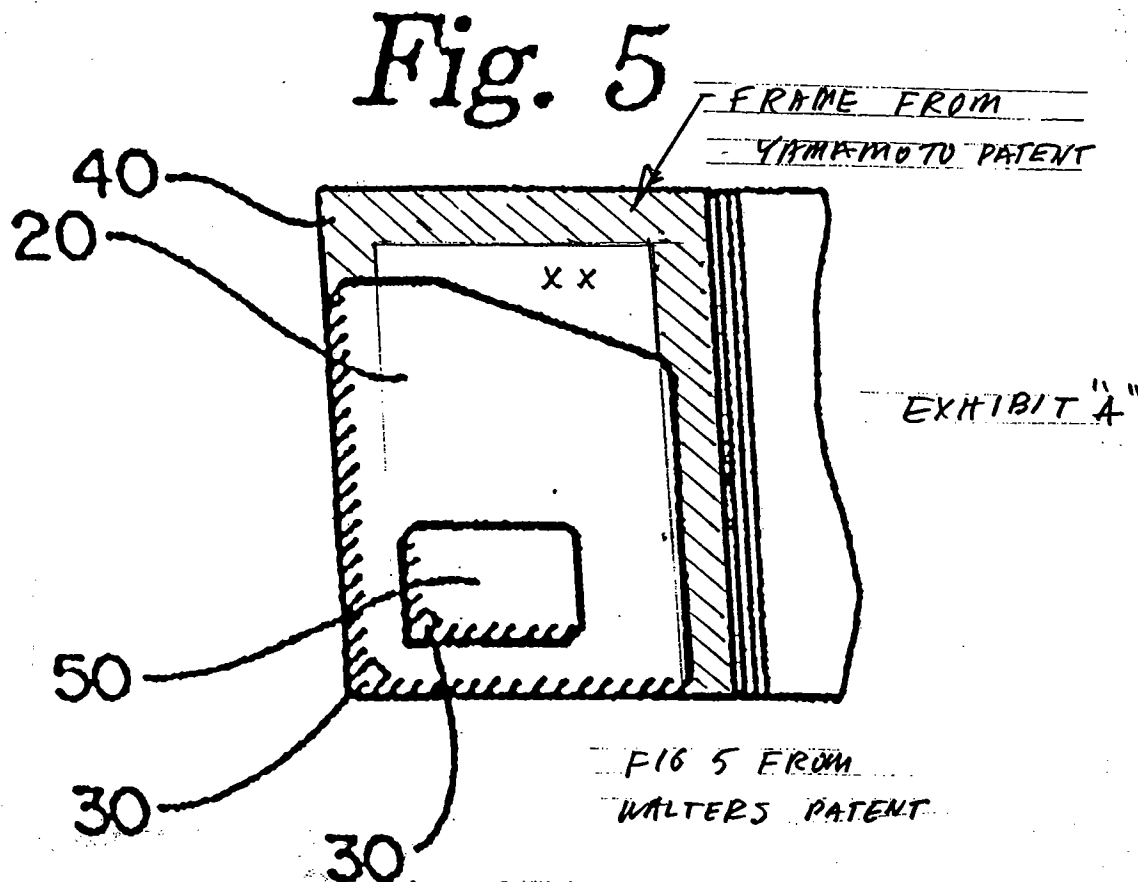


Exhibit A



Now, in Figure 1, note the area XX where the inner pocket does not cover the area within the frame of the Yamamoto patent.

Accordingly, first, the inner pocket of the Walters patent is only intended to store extra papers, and Walters does not have a transparent cover, so there is no basis whatsoever for combining the two patents. However, as indicated in Figure 1, even if the two patents could be combined (even without teachings), they still would not anticipate the claims as amended. Thus, the area "xx" as marked in Figure 1 would be within the Yamamoto frame, but would not be supported by the pocket, as required by the limitation in the claims as amended: "said assembly including construction arrangements for holding said pocket firmly against said transparent cover over the entire open area of said frame".

Thus applicant's new construction requires not only an inner pocket but also a pocket which holds an insert firmly against the transparent cover over the entire open area of the frame.

With respect to Buxton, a similar situation exists. Even if the two patents could be combined (despite any teaching to do so), they still would not anticipate the claims as amended. Thus, the pocket of Buxton would not provide support over the entire open area of the frame, as required by the limitation in the claims as amended: "said assembly including construction arrangements for holding said pocket firmly against said transparent cover over the entire open area of said frame." Buxton has no transparent cover as claimed (see col. 2, ll. 40-46, describing the cover as made from a strip of

"leather or the like"), and consequently cannot hold a pocket firmly against a transparent cover.

Furthermore, the multiplicity of pockets are designed to support pads. As a result, the pockets must provide space to accommodate a full pad of paper. The inner pocket would therefore not be held "firmly" against the cover, as there must be room for the pad. Combining Buxton with Yamamoto would produce a binder with a leather, non-transparent cover and/or a binder with a loose-fitting pocket.

Considering further the inventive background of the claimed invention, the inventors recognized the problem posed by the cover view patents such as Yamamoto 6,206,602 (cited in the introduction of the present application) in that it was difficult to insert visual inserts into the three sided pocket of Yamamoto type pockets. Further, the present inventors went on to devise a pocket construction secured along two sides, and located on the inside of the transparent cover which solved the problem.

In addition, with the pocket being at least co-extensive with the open area of the frame on the transparent front cover, the visual insert is held positively in the proper location. The insert may be as thin as a single sheet of printed paper, as opposed to the considerable thickness of the Buxton pad of paper.

In the present case, applicants were the first to perceive a problem and to develop a solution to the problem, and this is a classical type of fact situation which gives rise to patentability, as developed by the U.S. Supreme Court in Eibel Process Co. v. Minnesota and Ontario Paper Co., 261 US 45 (1923).

As mentioned above, the covers of both the Walters patent and the Buxton patent are opaque, and do not have a frame as required by the claims. The pocket of Walters is disclosed as being intended to receive miscellaneous loose paper and material, while the pocket of Buxton is disclosed as being intended to receive a pad of paper. Accordingly, even if the covers of Walters or Buxton were to be transparent, all that would be visible would be a loose batch of miscellaneous papers, not even firmly held against the cover.

It is only through the teachings of applicant's specification that the claimed combination could be created; and this clearly constitutes improper "hindsight" which has been widely condemned by the courts.

Here, we have the often-encountered "hindsight" pitfall at work, with applicants' application providing the only guide to the combination.

With regard to the use of "hindsight", or the use of the applicant's teachings to combine prior art, the courts have universally condemned such specious combinations and have upheld the validity of patents or claims of patents in which such hindsight was employed to combine the references. Notable among the decisions relating to the subject matter is the decision of the Supreme Court of the United States in the case of Diamond Rubber Co. of New York v. Consolidated Rubber Tire Co., 220 U.S. 428, 31 S. Ct. 444 (1911). In this case the Supreme Court stated "Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and 'in the light of the accomplished result,' it is often a matter of wonder how they so long 'eluded the search of the discoverer and set at defiance the speculations of inventive genius'. . . . Knowledge after the event is always easy, and problems once solved present no difficulties, indeed

may be represented as never having had any ..." Id. at 434-35, 31 S. Ct. at 447. The Supreme Court then went on to uphold the patent under consideration.

In a similar vein, the Court of Customs and Patent Appeals stated in the case of In re Kamm and Young, 172 U.S.P.Q. 298 (C.C.P.A. 1972), that the basic mandate inherent in 35 U.S.C. § 103 is that piecemeal reconstruction of prior art patents in the light of applicant's disclosure shall not be basis for holding of obviousness. Similarly, in the case of Ex Parte Lange, 72 U.S.P.Q. 90, 91 (C.C.P.A. 1947), the Court said, "It seems to us that the examiner is using appellant's disclosure for the suggestion of the combination since there is no suggestion in any of the patents for their combination in the manner claimed by applicant. The cases of Ex Parte Myerson, 72 U.S.P.Q. 49 (C.C.P.A. 1946), and Ex Parte Gary, 76 U.S.P.Q. 224 (C.C.P.A. 1947), are to the same effect. Two other cases decided by the C.C.P.A. in which hindsight was condemned are In re Stephens, Wenzel, and Browne, 145 U.S.P.Q. 656 (C.C.P.A. 1965), and In re Leonor, 158 U.S.P.Q. 20 (C.C.P.A. 1968). In the Stephens case, the Court stated that "References may not be combined indiscriminately and with guidance from applicant's disclosure to show that claims are unpatentable." 145 U.S.P.Q. at 657. In the Leonor case, the court dismissed the examiner's rejection of the claims in suit as "hindsight reconstruction of prior art" and disapproved of the board's affirmance of that rejection on the basis that it "violates [the] intent and spirit of 35 U.S.C. § 103." 20 U.S.P.Q. at 20-21. In Leonor, the court said that the issue is "whether teachings of prior art would of themselves, and without benefit of applicant's disclosure, suggest [a process] which would make claimed invention obvious..." (emphasis court's). Id. at 21.

The Court of Appeals for the Federal Circuit has been equally strong in its condemnation of "hindsight" or similar rejections. Thus, for example, in ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929 (Fed. Cir. 1984), the Federal Circuit reversed a holding of invalidity because there was no teaching to combine the references. Similarly, the Federal Circuit, in W.L. Gore Associates, Inc. v. Garlock, Inc., 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983), referenced the "insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher," and condemned this type of rejection or holding of unpatentability.

Finally, reference is made to the decision of McGinley vs. Franklin Sports, Inc., 60 USPQ 2d 1001 (2001), in which the Court of Appeals for the Federal Circuit required strong teachings for combining references, particularly where at least one of the references teaches away from the invention.

To summarize, there is no teaching at all to combine the view type binder of Yamamoto with the pocket of Walters or Buxton, and even if these references were to be combined they lack both the spirit and the structure of the present invention.

It is further noted that the proposed combination of the Yamamoto and Walters and/or Buxton patents is applied to all claims with various additional references being also applied relative to some of the claims. However, where the basic Yamamoto/Walters or Buxton combination is not proper, as applied to the claims as amended, the remaining claims are similarly allowable.


In conclusion, an early decision upholding the patentability of the claims on appeal is respectfully solicited.

## IX. CONCLUSION

For the foregoing reasons, it is submitted that the present invention as claimed is not rendered obvious from Yamamoto and Walters and/or Buxton, and that the Examiner's rejections of Claims 1, 11, 16, 21, 22, 25, 26, 29 and 30 were therefore erroneous. Appellant respectfully requests reversal of the rejection of Claims 1, 11, 16, 21, 22, 25, 26, 29 and 30.

Respectfully submitted,

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## **X. APPENDIX**

### **CLAIMS ON APPEAL:**

Claim 1. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral coating forming a substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

an inner pocket having approximately the same dimensions as the firmly secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free and unsecured to the cover at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket; and

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame;

said pocket extending at least over said open area;

whereby a visual insert may be easily slipped into said pocket, and held in said pocket for viewing of said visual insert through said transparent front cover.

Claim 5. A system including a binder assembly comprising:

a binder assembly comprising:

(a) front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral coating forming a substantially opaque frame; said covers having inner and outer surfaces;

(b) an inner pocket having approximately the same dimensions as the cover firmly secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free and unsecured to the cover at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket; said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame;

(c) an insert having visual information applied thereto in the area within said frame, said insert being in said inner pocket;

(d) a plurality of transparent dividers with outwardly projecting tabs thereon mounted within said binder; and

(e) said rear cover having a partial pocket extending for less than half of the area of said rear cover; said partial pocket being formed of the same sheet as the rear cover, with the pocket being formed by folding a sheet upward and bonding it in place, said rear cover being coated with substantially opaque material similar to the frame coating on the front cover; and

said system further including a computer, a keyboard and a printer, for displaying the framed front cover of said binder and forming visual material within said frame, and printing out the visual insert for insertion into the inner pocket with the visual material set-off and enclosed by said frame.

Claim 6. A binder assembly as defined in claim 5 wherein said rear cover partial pocket has a plurality of slits therein for mounting cards on said partial pocket.



Claim 11. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

an inner pocket firmly secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket;

an insert having visual information applied thereto in the open area within said frame, said insert being in said inner pocket; and

said pocket having an extent at least coextensive with said open area;

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame;

whereby said pocket maintains said visual material in engagement with the inner surface of said front cover, with the visual material located within the open area of the frame.

Claim 12. A binder assembly as defined in claim 11 wherein said rear cover has a rear pocket of the same material as the said rear cover; said rear pocket being formed of the same sheet as the rear cover; with the pocket being formed by folding said sheet and bonding it in place.

Claim 14. A binder assembly as defined in claim 11 12 wherein said rear pocket is transparent.

Claim 15. A system including a binder assembly comprising:

a binder assembly comprising:

(a) front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral coating forming a substantially opaque frame; said covers having inner and outer surfaces;

(b) an inner pocket having approximately the same dimensions as the cover secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being firmly secured along its outer edge and its bottom edge, and being free and unsecured to the cover at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket;

(c) an insert having visual information applied thereto in the area within said frame, said insert being in said inner pocket;

(d) a plurality of transparent dividers with outwardly projecting tabs thereon mounted within said binder; and

(e) said rear cover having a partial pocket extending for less than half of the area of said rear cover; said partial pocket being formed of the same sheet as the rear cover, with the pocket being formed by folding a sheet upward and bonding it in place, said rear cover being coated with substantially opaque material similar to the frame coating on the front cover; and

said system further including a computer, a keyboard and a printer, for displaying the framed front cover of said binder and forming visual material within said frame, and

printing out the visual insert for insertion into the inner pocket with the visual material set-off and enclosed by said frame.

Claim 16. A binder assembly as defined in claim 11 wherein said rear cover is opaque and wherein it has a coating to substantially match the frame on the front cover.

Claim 17. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

an inner pocket having approximately the same dimensions as the cover firmly secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner areas of said pocket;

an insert having visual information applied thereto in the open area within said frame, said insert being in said inner pocket;

a plurality of dividers with outwardly projecting tabs thereon mounted within said binder; and

said rear cover having a rear pocket formed of the same sheet as the rear cover;  
and

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame.

Claim 19. A system including a binder assembly comprising:

a binder assembly comprising:

(a) front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral coating forming a substantially opaque frame; said covers having inner and outer surfaces;

(b) an inner pocket having approximately the same dimensions as the cover secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free and unsecured to the cover at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket;

(c) an insert having visual information applied thereto in the area within said frame, said insert being in said inner pocket;

(d) a plurality of transparent dividers with outwardly projecting tabs thereon mounted within said binder; and

(e) said rear cover having a partial pocket extending for less than half of the area of said rear cover; said partial pocket being formed of the same sheet as the rear cover; with the pocket being formed by folding a sheet upward and bonding it in place, said rear cover being coated with substantially opaque material similar to the frame coating on the front cover; and

said system further including a computer, a keyboard and a printer, for displaying the framed front cover of said binder and forming visual material within said frame, and

printing out the visual insert for insertion into the inner pocket with the visual material set-off and enclosed by said frame.

Claim 21. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

an inner pocket having approximately the same dimensions as the cover firmly secured to the inner surface of said front cover; said inner pocket being secured along only two edges thereof to one of the semi-flexible covers of said binder assembly, permitting quick insertion of visual material into said pocket; and

an insert having visual information applied thereto in the open area within said frame, said insert being in said inner pocket; and

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame.

Claim 22. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

an inner pocket having four edges and has approximately the same dimensions as the cover firmly secured to the inner surface of said front cover; said inner pocket being secured to the front cover along two edges, and the other two edges being free and

unsecured to the front cover, thereby permitting quick insertion of visual material from the other two edges of said pocket; and

an insert having visual information applied thereto in the open area within said frame, said insert being in said inner pocket; and

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame.

Claim 24. In combination:

a semi-flexible cover-view binder assembly, comprising:

(a) front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

(b) an inner pocket having approximately the same dimensions as the cover firmly secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket;

(c) an insert having visual information applied thereto in the open area within said frame, said insert being in said inner pocket; and

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame;

said pocket extending at least over said open area;

whereby a visual insert may be easily slipped into said pocket, and held in said pocket for viewing of said visual inset through said transparent front cover; and

a computer, a keyboard and a printer, for displaying an image corresponding to the framed front cover of said binder, for forming visual material within the frame, and for printing out the visual insert for insertion into the inner pocket of said binder assembly with the visual material set-off and enclosed by said frame.

Claim 25. A binder assembly as defined in claim 1 wherein said covers are secured together at a binding and wherein said inner pocket is formed of a sheet which is secured to said binding, and is cut along the binding to form the inner free edge of said pocket.

Claim 26. A binder assembly as defined in claim 11 wherein said covers are secured together at a binding and wherein said inner pocket is formed of a sheet which is secured to said binding, and is cut along the binding to form the inner free edge of said pocket.

Claim 27. A binder assembly as defined in claim 17 wherein said covers are secured together at a binding and wherein said inner pocket is formed of a sheet which is secured to said binding, and is cut along the binding to form the inner free edge of said pocket.

Claim 28. An assembly as defined in claim 17 wherein said inner pocket extends over the greater portion of the inner surface of said front cover; and over the open area of said cover.

Claim 29. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a peripheral coating forming a substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;

an inner pocket have approximately substantially the same dimensions as the cover firmly secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free and unsecured to the cover at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket; and

said pocket extending at least over said open area;

whereby a visual insert may be easily slipped into said pocket, and held in said pocket for viewing of said visual inset through said transparent front cover.

said pocket being directly and firmly bonded to the inside of said front cover at a pocket-to-cover bond zone, which bond zone is free of expansion structure, whereby said insert is firmly and positively held in engagement with the inner surface of said front cover; with the visual material located and maintained within the open area of the frame.

Claim 30. A semi-flexible cover-view binder assembly, comprising:

front and rear semi-flexible plastic covers, said front cover being transparent and being provided with a coating forming a substantially opaque frame defining an open area within the frame; said covers having inner and outer surfaces;



an inner pocket secured to the inner surface of said front cover; said pocket having inner, outer, top and bottom edges; said inner pocket being secured along its outer edge and its bottom edge, and being free and unsecured to the cover at the top and inner edges, thereby permitting quick insertion of visual material from the top and inner edges of said pocket;

said pocket extending at least over said open area; and

said assembly including construction arrangements for holding said inner pocket firmly against said transparent cover over the entire open area of said frame.

whereby a visual insert may be easily slipped into said pocket, and held in said pocket for viewing of said visual insert through said transparent front cover.

## **XI. EVIDENCE APPENDIX PAGES**

This EVIDENCE APPENDIX includes a Declaration of Jay Sato dated March 5, 2003, as well as copies of *In Re Lee*, 61 USPQ2d 1430 (CAFC 2002), and *McGinley v. Franklin Sports Inc.*, 60 USPQ2d 1001 (CAFC 2001). These were all submitted as part of a Response to an Office Action dated October 20, 2003, and entered into the record at that time. Mr. Sato's declaration establishes the invention was commercially successful. Mr. Sato also makes a detailed review of the cited art and explains significant differences between the present invention and that cited art.

Docket No. 310048-650

Applicant: Norman Yamamoto. Examiner: M. Henderson  
Serial No. 09/921,934 Group Art Unit: 3722  
Filed: August 3, 2001 Docket No. 310048-650  
Title: FLEX-VIEW COVER BOUND DOCUMENT ASSEMBLY

**CERTIFICATE UNDER 37 CFR 1.8**

I hereby certify that this correspondence and identified enclosures are being deposited with the United States Postal Service, first class mail, postage prepaid, under 37 C.F.R. 1.8 on the date indicated, and is addressed to the Commissioner for Patents, BOX: Non-Fee Amendment, Washington, D.C. 20231 on March 5, 2003

*Justine S. Townsend*  
Justine S. Townsend

BOX: Non-Fee Amendment  
Commissioner for Patents  
Washington, D.C. 20231

**DECLARATION OF JAY SATO**

I, JAY SATO, hereby declare as follows:

1. I have been employed by Avery-Dennison Corporation, the assignee of the above-identified patent application for about two years. I am a Senior Product Development Engineer. I am a graduate with a B.S. Degree in Mechanical Engineering from Washington University of St. Louis, Missouri.

2. I have reviewed the communication from the U.S. Patent Office dated January 16, 2003, and the references cited in that communication, specifically including U.S. Patent No. 6,206,602 to Yamamoto et al. (Yamamoto '602), U.S. Patent No. 6,364,559 to Brown et al. (Brown '559), U.S. Patent No. 5,590,911 to Wilson (Wilson '911) and U.S. Patent No. 4,991,767 to Wyant (Wyant '676).

3. It is noted that the present invention involves a transparent pocket secured on only two sides to the inside of the semi-flexible binder front cover. The preferred embodiment, which Avery is commercializing and which is being claimed, is shown in FIG. 4 of the drawings. The pocket extends beyond the framed open area of the transparent cover, or is at least coextensive with the open area.

4. The claimed invention has shown commercial success. For example, the claimed invention was launched late last year (2002), however, sales of the transparent binder cover with the inner pocket were still high at 20,000 units, or \$140,000 in sales. To date, expectations and customer interests remain high and increased sales over the year 2002 are expected.

5. The rejections are based primarily on the Yamamoto '602 patent and further in view of Brown '559, Wilson '911 and Wyant '676 patents. Yamamoto '602 discloses a large size transparent pocket secured on three sides, while the upper edge of the plastic sheet is left open, to permit the insertion of visual display material (column 2, lines 60-67; FIG. 1 & 2). On a practical matter, it is difficult to insert visual display material, for example, an 8 1/2 x 11-paper size insert, via one opening. In contrast, the claimed invention claims a large size pocket secured on only two sides, thus allowing the top and right hand side to be open. Insertion of visual display material then is easy because the two open sides allow greater and easier access to the framed open area, while still holding the visual material insert firmly against the binder cover.

6. The combination of Yamamoto '602 with the secondary reference(s) is not proper because the prior art only discloses smaller-sized pockets for the purpose of holding various loose-leaf papers (see FIG. 5 of Brown '559 patent). In particular, in Brown '559, the pocket of FIG. 5 is only a partial pocket that is secured on two sides to the edges of the binder cover, and only covers about half of the area of the binder cover. The purpose of the Brown '559 partial-pocket is stated to be to hold business cards in the slits in the pocket. Further, a standard size 8 1/2 x 11 sheet of paper will not be held firmly in place against the cover by the Brown '559 pocket because the pocket leaves the top part and the right hand side of the paper free or loose. The free edges of any insert could easily be folded, crumpled or torn. Whereas, in the claimed invention, the pocket is large and extends to the edge of the binder cover or at least coextensive with the overlying open area, such that the paper insert(s) are firmly held in place against the cover throughout the area of the insert and does not have unsecured or loose edges. Accordingly, the pocket of the claimed invention and that of the Brown '559 are different first in dimension(s) and secondly they are different in purpose.

7. It is further noted that the inserts are formatted so that when the inserts are mounted in the pocket with the pocket fully enclosing the insert, the visual part of the insert is properly centered or located in the assembly to show the desired image within the frame on the binder cover. Now, regarding the Brown et al. patent, the pocket 45 is said to be of "polypropylene film with slits 53 shaped to receive business cards". Any loose leaf papers which

might be randomly hold within pocket 45 would not be accurately positioned relative to the cover. This is in contrast to the present invention in which the pockets extend over the cover frame area, so that the pockets accurately position the formatted insert to be visible through the cover frame.

8. Further, even if the combination of references were proper (which is not appropriate), as mentioned previously, the prior art does not disclose pockets that are of the same or similar dimensions as the pocket of the claimed invention. Again, the claimed invention recites a large pocket that is secured on only two sides and is at least coextensive with the framed open area or extends to the edges of the cover to both locate the visual inserts for viewing through the cover and to hold the inserts firmly in place. In contrast, the prior art references teach a large size pocket secured on three sides or a partial-pocket with much smaller dimensions. The partial-pockets in the prior art are for a different purpose and do not firmly hold the entire area of an 8 1/2 x 11 or A4 paper in place.

9. Thus, in the first place the combination of the prior art is not proper because the prior art disclose pockets that are secured on three sides leaving only one side open. A pocket with only one opening makes it difficult to insert visual material through. In the second place, the prior art describes pockets with a different purpose and function than the claimed invention. For example, in Brown '559, the partial-pockets are to hold business cards or possibly loose-leaf papers. In Wyant '767 the small pockets are to hold small size photographs or visual materials.

10. Accordingly, the complete binder of the claimed invention is clearly not suggested by these references, and the claimed invention appears to be satisfying a basic and long felt need for accurately holding visual inserts firmly in place to readily form a personalized cover binder. The differences from the prior art may be summarized as follows:

(a) The Yamamoto prior art binder has pockets secured on three sides, and is difficult to use.


(b) The Brown prior art binder has only a partial pocket for mounting business cards.

(c) The claimed full size pocket positions the formatted visual insert accurately located within the cover frame.

(d) The claimed full size pocket holds the visual insert against the cover across the entire area within the frame.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent application issuing thereon.

Respectfully submitted,

  
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Jay Sazo

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FULL TEXT OF CASES (USPQ2D)

All Other Cases

McGinley v. Franklin Sports Inc., 60 USPQ2d 1001 (CA FC 2001)

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McGinley v. Franklin Sports Inc., 60 USPQ2d 1001 (CA FC 2001)

**60 USPQ2D 1001**

**McGinley v. Franklin Sports Inc.**

**U.S. Court of Appeals Federal Circuit**

Nos. 00-1324, 01-1113

Decided August 21, 2001

#### Headnotes

#### PATENTS

##### [1] Infringement — Literal infringement (§120.05)

##### Patent construction — Claims — Means (§125.1307)

Federal district court properly construed limitation in claims for baseball training device, which requires “means for indicating orientation of the baseball relative to the palm of the hand,” to include egg-shaped indicia slightly tapered in direction of palm “and any equivalents of that structure,” even though written description only discloses egg-shaped indicia with tapered ends, since means-plus-function limitations are guaranteed range of equivalents beyond what is explicitly disclosed in patent document itself, pursuant to sixth paragraph of 35 U.S.C. §112; finger-shaped markings on accused training baseball are structurally equivalent to plaintiff’s tapered egg-shaped indicia, and therefore infringe asserted claims.

##### [2] Patentability/Validity — Obviousness — Combining references

#### JUDICIAL PRACTICE AND PROCEDURE

##### Procedure — New trial; JMOL (§410.30)

Federal district court, in action for infringement of patent for instructional baseball with markings for placement of fingers, erred in granting judgment as matter of law that patent is invalid for obviousness over two prior art references in combination, since plaintiff presented reasons to jury for rejecting combination of references, including specific differences between prior art and asserted claims, since jury heard evidence that patent issued without obviousness challenge even though both cited references were before examiner, since jury was properly instructed as to presumption of validity and defendant’s burden in overcoming same, and since plaintiff presented substantial evidence that references, considered together, teach away from their combination.

##### [3] Procedure — Motions generally (§410.31)

Federal district court did not abuse its discretion in denying plaintiff’s motion for leave to amend complaint to add additional plaintiff, even though proposed plaintiff was individual

plaintiff's wholly owned company, since plaintiff filed motion two months after deadline for motions and was not diligent in bringing matter to trial, and since trial courts are given broad latitude in managing and scheduling cases.

#### [4] Procedure — New trial; JMOL (§410.30)

Federal district court did not abuse its discretion by denying patent infringement defendant's motion seeking new trial, on issue of willfulness, for purpose of presenting testimony regarding its good faith belief that plaintiff's patent was invalid, since defendant did not make offer of proof under Fed. R. Evid. 103 to indicate what witness would have said in testimony, and since defendant took advantage of its opportunity at trial to present evidence to jury concerning its alleged good faith conduct.

### Particular Patents

#### Particular patents — General and mechanical — Baseball training device

5,407,193, McGinley, baseball pitching training device, judgment of invalidity reversed; jury verdict of willful infringement reinstated.

#### Case History and Disposition

Appeal from the U.S. District Court for the District of Kansas, Lungstrum, J.; 54 USPQ2d 1729.

Action by Michael L. McGinley against Franklin Sports Inc. for patent infringement. District court granted summary judgment for plaintiff on infringement issue. Following trial, jury found that claims were not invalid and were willfully infringed, but district court granted judgment as matter of law that claims were invalid for obviousness. Plaintiff appeals from grant of JMOL and denial of motion for leave to amend complaint to join his wholly-owned business as additional plaintiff, and defendant cross-appeals grant of summary judgment on infringement. JMOL is reversed, and judgment is otherwise affirmed; Michel, J., dissenting in separate opinion.

#### Attorneys:

Kip D. Richards, of Walters, Bender, Strohhahn & Vaughn, Kansas City, Mo., for plaintiff-appellant.

Joseph B. Bowman and Daniel P. Devers, of Shook, Hardy & Bacon, Kansas City, for defendant/cross-appellant.

#### Judge:

Before Mayer, chief judge, and Michel and Clevenger, circuit judges.

### Opinion Text

#### Opinion By: Clevenger, J.

This is a patent infringement suit in which Michael L. McGinley charges Franklin Sports, Inc. ("FSI") with willful infringement of claims 1, 2, 6, and 7 of U.S. Patent No. 5,407,193 ("the '193 patent"). On summary judgment, the United States District Court for the District of Kansas ruled in favor of McGinley on the issue of infringement, and the case proceeded to trial on the issues of validity and willfulness. The jury found that the asserted claims were not invalid and were willfully infringed. On a subsequent motion filed by FSI for judgment as a matter of law ("JMOL"), the trial court set aside the jury verdict on validity, holding that the asserted claims of the '193 patent are invalid as obvious pursuant to 35 U.S.C. §103(a).

McGinley appeals the district court's grant of JMOL of invalidity and the earlier denial of McGinley's motion for leave to amend the complaint to join his business, S.C. Products, Inc. ("SCP"), as an additional plaintiff. On cross-appeal, FSI challenges the district court's grant of summary judgment in favor of McGinley on infringement and the denial of its motion for a new trial on willfulness.

Because we conclude that the district court erred in finding that no reasonable jury could have reached a verdict of nonobviousness, we reverse the JMOL of invalidity. We affirm the district court's rulings in all other respects.

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### Background

The application for the '193 patent was filed on July 3, 1991, and the patent issued on April 18, 1995. In general terms, the '193 patent discloses and claims an instructional pitching device in the form of a regulation baseball with specific "finger placement indicia" for

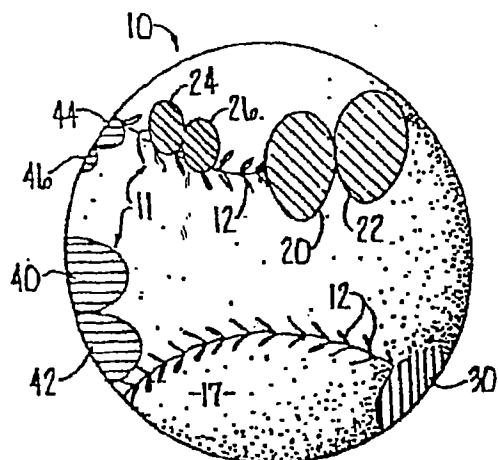


teaching students how to grasp a baseball for throwing different types of pitches. With the endorsement of a famous professional baseball pitcher, McGinley's invention was marketed and distributed as the Roger Clemens Instructional Baseball ("RCIB"). FSI also manufactured and sold a baseball designed to teach students to throw different types of pitches. The accused device in this case, the Franklin Pitch Ball Trainer 2705 ("FSI's 2705 baseball"), was sold in the United States from at least as early as April 1995 to March 1999.

In the preferred embodiment of the claimed invention, an aspect of which is illustrated in the following figure, three sets of finger placement

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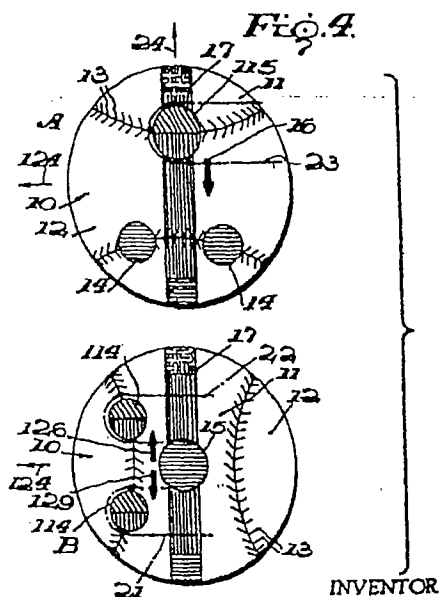
indicia 11 are positioned on the cover 17 of a regulation baseball 10. Each set of indicia 11 is intended to illustrate the placement of a student pitcher's index and middle fingers so as to throw a particular type of pitch (e.g., two-seam fast ball, slider, curve ball, etc.).



Indicia 11 are presented in two sizes, to allow the indicia intended for a left-handed student to be easily distinguished from the indicia intended for a right-handed student. The smaller indicia, exemplified by indicia 24 and 26, are intended for use by left-handed pitchers, while the larger indicia, as represented by indicia 20 and 22, are intended for use by right-handed pitchers. Moreover, indicia 11 are coded by coloring all indicia which are representative of a certain type of pitch in one color and indicia representative of another type of pitch in a different color. To further assist a student in learning how to throw a particular pitch, the indicia are shaped so as to indicate the relationship of the palm of the hand in grasping the ball. Specifically, the portion of each "egg-shaped" indicium to be situated closest to the palm is slightly tapered so as to indicate the correct orientation of the baseball in the palm. Although the preferred embodiment of the '193 patent makes no provisions for "thumb placement indicia," the written description of the '193 patent repeatedly states that the thumb is generally to be positioned on the baseball at a location opposite the corresponding set of finger placement indicia.

As originally filed in 1991, the claims of the '193 patent required that eight sets of finger placement indicia be provided on a single baseball pitching training device. Specifically, the four original claims all required the presence of indicia demarcating the placement of fingers for four specific types of pitches (i.e., curve ball, two-seam fast ball, slider, and four-seam fast ball), for both left-handed and right-handed students. These claims were rejected on obviousness grounds in view of U.S. Patent No. 2,925,273 ("Pratt"), which had issued on February 16, 1960, more than thirty years before McGinley's filing date. Pratt was brought to the attention of the Patent and Trademark Office ("PTO") via an Information Disclosure Statement ("IDS") filed concurrently with McGinley's priority patent application by McGinley's counsel.

Like the claims originally filed by McGinley, Pratt disclosed, inter alia, a conventional baseball having multiple sets of finger placement indicia for teaching baseball players to throw different types of pitches. Specifically, in the embodiment illustrated in Figure 4 (shown below), Pratt's written description disclosed the placement of finger and thumb placement indicia for three types of pitches (i.e., fast ball, curve ball, and screw ball). Equatorial band 17 was an important feature of Pratt's claimed invention. When a student threw Pratt's baseball correctly, bands of complementary colors in the equatorial band would blend into a single color to provide a visual indication to the student that the ball had been thrown with proper rotation.

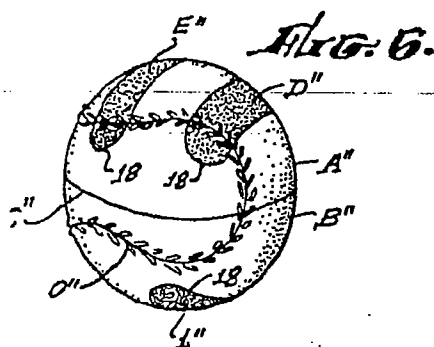


Although the similarities between Pratt's disclosure and McGinley's then-existing

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claims are striking, there are also a few differences between Pratt's teachings and McGinley's initially claimed invention. First, Pratt did not provide for different sets of indicia on a single ball for distinguishing between left-handed and right-handed students. Also, Pratt's finger placement indicia were described and illustrated as being circular, but "phantom-lines" illustrating the placement of fingers 21, 22 and thumb 23 were included in the patent figures. These phantom lines, however, are not described in Pratt as actual markings on the baseball. In contrast, the finger placement indicia in the preferred embodiment of McGinley's invention are actually marked on the ball, and are "egg-shaped" and slightly tapered at one end to indicate the proper orientation of the ball with respect to the student's palm.

Another prior art reference which was brought to the attention of the PTO via McGinley's IDS was U.S. Patent No. 3,110,494 ("Morgan"), which issued on November 12, 1963. In contrast to Pratt and the '193 patent, which are based on using a conventional regulation baseball, Morgan describes a baseball training device using a lightweight and inexpensive baseball "replica" fabricated in the form of plastic or metallic hemispherical shells which occupy a minimum of space before use, but which can be easily assembled by gluing the two hemispherical halves together. In Figure 6 of Morgan (shown below) and the accompanying written description, a single set of finger-shaped marks D", E", and L" (for teaching proper placement of the forefinger, middle finger, and thumb, respectively) are provided on the baseball training device to teach a student how to throw a baseball with a particular curve or break.



Throughout the prosecution history of the '193 patent, McGinley's claims at issue in this case were rejected in view of Pratt on anticipation grounds. With respect to Morgan, although this reference was before the PTO during the entire pendency of McGinley's patent application, it was never explicitly relied upon as a basis for a rejection based on a *prima facie* case of anticipation or obviousness.

Ultimately, in 1995, after a series of rejections, amendments, and responses (including a partially successful appeal to the Board of Patent Appeals and Interferences and the filing of a continuation application), the '193 patent issued with 14 claims. Ten of the issued claims (*i.e.*, claims 3-5 and 8-14) explicitly retain the original limitation requiring the inclusion of finger placement indicia on a single baseball pitching training device for both left-handed and right-handed students. These claims were not asserted in this case. Instead, McGinley asserted the remaining four claims (*i.e.*, independent claim 1 and dependent claims 2, 6, and 7) against FSI, alleging willful

infringement by making and selling the 2705 baseball. The asserted claims read as follows in their entirety:

1. A baseball pitching training device for duplicating finger placement on a baseball by a student comprising:
  - a baseball cover;
  - a plurality of sets of finger placement indicia on said cover, said sets of indicia comprising:
    - a first set of indicia demarcating the placement of finger [sic] for throwing a first pitch;
    - a second set of indicia demarcating the placement of fingers for throwing, [sic] a second pitch;
    - a third set of indicia demarcating the placement of fingers for throwing a third pitch;
  - means for indicating the orientation of the baseball relative to the palm of the hand; and
  - means for coding said finger placement indicia sets for identification of each of said indicia associated with any one of said sets.
2. The device as claimed in claim 1 wherein said means for coding comprises a color for association with each indicia of a particular set.

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6. The device as claimed in claim 1, wherein said means for indicating orientation comprises shaping said indicia to distinguish that portion of the baseball to be located proximate to the palm of the hand.
7. The device as claimed in claim 1 wherein said indicia are shaped to indicate a correct orientation of the baseball with respect to the palm of the hand.

'193 patent, col. 5, ll. 29-48; col. 5, ll. 61-64; col. 6, ll. 1-3.

The district court held a *Markman* hearing on January 21, 1999, and issued an order construing the disputed claims of the '193 patent shortly thereafter. *McGinley v. Franklin Sports, Inc.*, 45 F. Supp. 2d 1141 (D. Kan. 1999) (*McGinley I*). On cross-appeal, FSI challenges only the district court's interpretation of the claimed "means for indicating the orientation of the baseball relative to the palm of the hand." The district court construed the term as a means-plus-function limitation pursuant to 35 U.S.C. § 112, ¶6, and concluded that the corresponding structure included "a slight taper at the portion of each indicia situated closest to the palm of the hand, and any equivalents of such structure." *Id.* at 1146. FSI's position on appeal is that the claim limitation is not entitled to any range of equivalents whatsoever.

Based on its claim interpretation, the district court granted McGinley's motion for partial summary judgment on the issue of infringement on October 28, 1999. *McGinley v. Franklin Sports, Inc.*, 75 F. Supp. 2d 1218, 1224-25 (D. Kan. 1999) (*McGinley II*). At the same time, however, the district court denied FSI's motion for partial summary judgment on validity, *id.* at 1225-32, finding disputed issues of material fact with respect to the obviousness issue. The case proceeded to trial, and on January 19, 2000, the jury returned a verdict in favor of McGinley, finding the '193 patent not invalid and willfully infringed.

FSI then filed a post-trial motion, seeking JMOL on the issues of validity and willfulness. In the alternative, FSI also moved for a new trial. On April 5, 2000, the district court set aside the jury's verdict and granted FSI's motion for JMOL on invalidity, concluding that "as a matter of law, plaintiff's patent is invalid as obvious in light of Pratt or the combination of Pratt and Morgan." Judgment was entered in favor of FSI, and this appeal followed, vesting us with jurisdiction pursuant to 28 U.S.C. §1295(a)(1).

## II

### Claim Interpretation

As the first step of the infringement and validity analyses in this case, we resolve any claim interpretation disputes on appeal, without deference to the district court. *Amazon.com, Inc. v. Barnesandnoble.com, inc.*, 239 F.3d 1343, 1351, 57 USPQ2d 1747, 1751-52 (Fed. Cir. 2001); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1174-75 (Fed. Cir. 1998) (en banc); *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370, 38 USPQ2d 1461 (1996).

The only claim interpretation dispute remaining on appeal concerns the limitation in all of the asserted claims requiring "means for indicating the orientation of the baseball relative to the palm of the hand." There is no dispute that this term should be construed as a means-plus-function limitation pursuant to 35 U.S.C. § 112, ¶ 6, and that the claimed function is "indicating the orientation of the baseball relative to the palm of the hand." The only dispute on appeal concerns identification of the corresponding structure.

[1] The district court ruled that the corresponding structure included egg-shaped indicia having "a slight taper at the portion of each indicia situated closest to the palm of the hand, and any equivalents of such structure." *McGinley I* at 1146. In contrast, FSI's position is that the claim limitation is not entitled to any range of equivalents whatsoever, on the basis that the written description of the '193 patent discloses only egg-shaped indicia with tapered ends, and that undisclosed equivalents cannot be construed to be within the scope of a patent claim. In support for its position, FSI points out that the only orientation means explicitly described in the '193 patent is a slight taper to the finger placement indicia, which are to be understood as being shaped in the form of egg-shaped ovals by

inspecting the figures of the '193 patent:

To further assist the student the indicia are shaped so as to indicate the relationship of the palm of the hand in grasping the ball. The portion of each indicia intended to be situated closest to the palm is slightly tapered thereby to assist the student in achieving correct orientation of the ball in the palm.

'193 patent, col. 5, ll. 16-22.

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FSI's argument on this point is wholly without merit, for it misunderstands the statute. Drafters of means-plus-function claim limitations are statutorily guaranteed a range of equivalents extending beyond that which is explicitly disclosed in the patent document itself:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, *and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.*

35 U.S.C. §112, ¶ 6 (1994) (emphasis added). We therefore affirm the district court's claim construction.

### III

#### Infringement

This brings us to FSI's cross-appeal from the district court's grant of McGinley's motion for summary judgment of infringement. At the summary judgment stage, the district court compared the asserted claims of the '193 patent as they had been construed in *McGinley I* to undisputed evidence concerning FSI's 2705 baseball. In the accused FSI 2705 baseball, the finger placement indicia are in the shape of finger-like outlines that are blunted at the end furthest from the fingertips.

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). For purposes of the motion, "[t]he evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

Upon reviewing the record before it at that stage of the litigation, the district court concluded that FSI had not demonstrated the existence of any genuine issue as to any material fact concerning infringement. Specifically, the finger-shaped markings on the accused FSI 2705 baseball were found by the district court to be functionally-identical and structurally-equivalent to the tapered egg-shaped indicia disclosed in the '193 patent:

Although the markings on defendant's ball are shaped somewhat differently than those found on plaintiff's product,[1] the court concludes that the difference is insubstantial: an elongation of the finger indicia, coupled with "blunting" the ends of each mark, as opposed to tapering them, adds nothing of significance to the structure disclosed in plaintiff's patent specification. Both types of indicia show the student precisely how to grip the baseball, and the difference between the structure used to accomplish this function is, at best, an insignificant alteration.

McGinley II at 1224 (footnote not in original). We review *de novo* the district court's legal conclusion that summary judgment of infringement was warranted in this case. *Ethicon Endo Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1315, 47 USPQ2d 1272, 1275 (Fed. Cir. 1998).

On appeal, FSI does not quibble with the district court's conclusion that the finger-shaped markings on the accused FSI 2705 baseball are structural equivalents of the tapered egg-shaped indicia described in the '193 patent. Instead, FSI simply argues that the "means for orienting" limitation in the asserted claims is not entitled to a range of equivalents at all. Since we have already rejected that argument, FSI's cross-appeal on infringement fails as well. Moreover, our review of the record reveals that FSI did not present any nonconclusory evidence in opposition to McGinley's motion for summary judgment of infringement which would tend to indicate that an artisan of ordinary skill would *not* consider the finger-shaped indicia on the accused FSI 2705 baseball to be structural equivalents of the tapered egg-shaped indicia explicitly described in the '193 patent. Therefore, we affirm the district court's grant of summary judgment of infringement.

### IV

#### Obviousness

A patent is invalid for obviousness if "differences between the subject matter sought to

be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §103(a) (1994). "Throughout the obviousness determination, a patent retains its statutory presumption of validity, *see* 35 U.S.C. §282, and the movant retains the burden to show the invalidity of the claims by clear and convincing evidence as to underlying facts." *Rockwell Int'l. Corp. v. United States*, 147 F.3d 1358, 1364, 47 USPQ2d 1027, 1031-32 (Fed. Cir. 1998).

Although it is well settled that the ultimate determination of obviousness is a question of law, it is also well understood that there are factual issues underlying the ultimate obviousness decision. *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479, 44 USPQ2d 1181, 1183 (Fed. Cir. 1997). Specifically, the obviousness analysis is based on four underlying factual inquiries, the well-known *Graham* factors: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *Kegel Co., Inc. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1430, 44 USPQ2d 1123, 1130 (Fed. Cir. 1997).

At trial, FSI argued, *inter alia*, that the asserted claims of the '193 patent were obvious in view of either Pratt alone, or in view of Pratt in combination with Morgan. FSI's obviousness theories are best summarized in its own words from its opening brief on appeal:

The only element of the asserted claims that is not clearly anticipated by the Pratt patent is the finger shaped marks that orient the ball with respect to the palm of the user's hand. However, this feature is obvious in light of the lines indicating finger placement on the drawings of the Pratt patent. Moreover, the concept of a set of finger marks to orient the ball is clearly taught in the Morgan patent. It would have been obvious to one of ordinary skill in the art to substitute the finger marks of the Morgan patent for the marks of the Pratt patent. Or, stated another way, it would have been obvious to place three sets of marks on the Morgan ball in light of the teaching of Pratt.

In other words, FSI argued to the jury that the "missing element" in Pratt (*i.e.*, the "means for orientation") can be found either in the "phantom lines" of Pratt or in Figure 6 of Morgan. McGinley argued at trial that there was no motivation to combine the prior art as suggested by FSI, and that even if such a motivation to combine had been demonstrated, that the commercial success of both McGinley's RCIB and FSI's accused 2705 baseball constituted sufficient evidence of secondary considerations that would negate any *prima facie* showing of obviousness.

The jury agreed with McGinley. Specifically, in the special verdict form used in this case, the jury answered three questions that are relevant to this appeal in favor of McGinley. First, the jury found that FSI had not proven by clear and convincing evidence that each of the elements of the invention defined in claims 1, 2, 6 and 7 of the '193 patent is disclosed in Pratt. This was a factual finding. *In re Beattie*, 974 F.2d 1309, 1311, 24 USPQ2d 1040, 1041 (Fed. Cir. 1992) ("What a reference teaches is a question of fact.").

Second, the jury found that FSI had not proven by clear and convincing evidence that any of the asserted claims were invalid as being obvious in view of Pratt alone. Finally, the jury found that FSI had not proven by clear and convincing evidence that any of the asserted claims were invalid as being obvious in view of a combination of Pratt and Morgan. These latter two findings by the jury are directed to the ultimate legal issue of obviousness, and provide no insight as to the jury's findings with respect to the underlying factual underpinnings. The parties do not object to the phrasing of the questions that were posed to the jury in the verdict form, nor do they challenge the district court's comprehensive jury instructions on obviousness.

In its motion for JMOL, FSI argued that no reasonable jury could have concluded that the asserted claims were not obvious in view of either Pratt alone or in view of Pratt in combination with Morgan. The district court agreed, and granted FSI's motion for JMOL. Specifically, the court found that "no reasonable jury could conclude that the motivation to combine Pratt and Morgan did not exist." Moreover, the district court "simply [did] not believe that the evidence regarding secondary considerations [was] sufficient to overcome its firm conclusion that, as a matter of law, plaintiff's patent is invalid as obvious in light of Pratt or the combination of Pratt and Morgan." In sum, the district court concluded that "in light of Pratt alone, as well as in light of Pratt and Morgan in combination, the claims

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set forth in the '193 patent are invalid as obvious."<sup>2</sup>

We review a grant of JMOL without deference to the district court. *Tex. Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1563, 39 USPQ2d 1492, 1496 (Fed. Cir. 1996). Entry of JMOL is inappropriate unless the jury's verdict is unsupported by substantial evidence or premised on incorrect legal standards. *Applied Med. Res. Corp. v. United States Surgical Corp.*, 147 F.3d 1374, 1376, 47 USPQ2d 1289, 1290-91 (Fed. Cir. 1998); *accord Jackson v. City of Albuquerque*, 890 F.2d 225, 230 (10th Cir. 1989); *J.I. Case Credit Corp. v. Crites*, 851 F.2d 309, 311 (10th Cir. 1988) (noting that JMOL is appropriate "only if the proof is all one way or so overwhelmingly preponderant in favor of the movant as to permit no other rational conclusion").

In analyzing the correctness of a JMOL overturning a jury verdict of nonobviousness, we must consider the facts before the district court, and then determine whether the district court's ultimate judgment on obviousness is correct as a matter of law. *Richardson-Vicks*, 122 F.3d at 1479, 44 USPQ2d at 1183. In re-creating the facts as they may have been found by the jury, and in applying the *Graham* factors to the evidence of record in this case, we assess the evidence in the light most favorable to the verdict winner, in this case McGinley. *Id.*; *accord Lucas v. Dover Corp.*, 857 F.2d 1397, 1400 (10th Cir. 1988) ("In determining whether the grant of a

motion for [JMOL] is appropriate, the court must view the evidence and indulge all inferences in favor of the party opposing the motion and cannot weigh the evidence, consider the credibility of witnesses or substitute its judgment for that of the jury.” (internal quotations omitted).

Whether a patent claim is obvious under section 103 depends upon the answer to several factual questions and how the factual answers meld into the legal conclusion of obviousness *vel non*. In this case, we think that the central question is whether there is reason to combine the Pratt and Morgan references, because if the references are properly combined, it is certain that the claims are *prima facie* invalid for obviousness. If the jury was entitled to conclude that these two references should not be combined, then the asserted claims of the '193 patent cannot be invalid for obviousness in the light of the proposed combination. If those claims are not invalid under a combination of Pratt and Morgan, then, as a matter of logic, those claims cannot be invalid in the light of Pratt alone. We thus turn first to the issue of whether Pratt and Morgan must be combined.

The genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some “teaching, suggestion or reason” to combine cited references. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997). When the art in question is relatively simple, as is the case here, the opportunity to judge by hindsight is particularly tempting. Consequently, the tests of whether to combine references need to be applied rigorously. See *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999), *limited on other grounds by In re Gartside*, 203 F.3d 1305, 53 USPQ2d 1769 (2000) (guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher).

Whether a motivation to combine prior art references has been demonstrated is a question of fact. *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1348, 53 USPQ2d 1580, 1586 (Fed. Cir. 2000). The assessment of whether to combine references in a given case has sometimes been viewed conceptually as a subset of the first *Graham* factor, the scope and content of the prior art. See, e.g., *id.*; *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881-83, 886, 45 USPQ2d 1977, 1981-82, 1985 (Fed. Cir. 1998). Although that view is not incorrect, accurate assessment of whether to combine references may require attention to other *Graham* factors. For example, the level of skill in the art may inform whether the artisan would find a suggestion to combine in the teachings of an exemplar of prior art. Where the level of skill is high, one may assume a keener appreciation of nuances taught by the prior art. Similarly, appreciation of the differences between the claims in suit and the scope of prior art references—a matter itself informed by the operative level of skill in the art— informs the question of whether to combine prior art references. At bottom, in each case the factual inquiry whether to combine references must be thorough and searching.

There is no question here that FSI presented sufficient evidence at trial from which a jury

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—could have decided that one of ordinary skill in this case would have been motivated to combine Pratt and Morgan to produce a *prima facie* obvious invention. Specifically, FSI argued to the jury that the only elements of the asserted claims that are not clearly anticipated by Pratt are the finger-shaped marks that orient the ball with respect to the palm of the user's hand. Referring to the “phantom lines” in Pratt as suggestive of finger placement on the ball, FSI argued that one of ordinary skill would have been motivated to substitute the finger marks from the Morgan ball for the circular marks on Pratt, or alternatively to place three sets of marks on the Morgan ball in the light of Pratt's teachings. In addition, FSI argued that one of ordinary skill would have known to add the finger orientation means of the Morgan patent to Pratt by “filling in” the phantom lines in Pratt's drawings and treating them as finger orientation means.

[2] But the jury did not hear a one-sided case on the issue of obviousness generally, and in particular on whether to combine Pratt and Morgan. As FSI conceded at oral argument, McGinley presented reasons to the jury to reject a combination of the references. McGinley argued many grounds to support his contention that the asserted claims are not obvious in the light of Pratt and Morgan. To counter FSI's claim that those references should be combined to render McGinley's “means for orientation” obvious, McGinley pointed to specific differences between the prior art and the asserted claims. For example, Morgan does not disclose the required markings for at least three different kinds of pitches, as do the asserted claims. And Morgan does not disclose markings on a real baseball, as do Pratt and the asserted claims. We recount the gist of this testimony below.

The jury heard from Mr. Charles Quinn, FSI's vice president of marketing and corporate representative at trial. Quinn testified in detail as to the express teachings of Pratt and Morgan, and as to the differences between these references and the asserted claims. For example, he conceded that the markings on the baseball in Pratt's invention were circular, and therefore incapable of indicating orientation. Trial Tr. Vol. 2, p. 140. He also acknowledged that the “phantom lines” in Pratt's drawings were not actually markings on a baseball. Trial Tr. Vol. 2, pp. 177-78. Quinn also pointed out that Morgan did not discuss implementing a baseball training device using a regulation baseball. Trial Tr. Vol. 2, pp. 172-73. Moreover, he acknowledged that Morgan taught only the provision of indicia for throwing a single type of pitch on each training device, instead of three sets of indicia as required in the asserted claims. Trial Tr. Vol. 2, p. 145.

The jury also heard from Mr. Richard Stitt, the attorney who prosecuted the '193 patent. Stitt testified at length about the prosecution history of the '193 patent and the fact that Pratt and Morgan were considered by the PTO throughout the entire pendency of McGinley's application. He confirmed that the “phantom lines” in Pratt's drawings were not actually marked on a baseball. Trial Tr.

Vol. 3, p. 56. Stitt also pointed out that the PTO never rejected the asserted claims as obvious in view of Pratt, and that it was never suggested by the PTO that the phantom lines of Pratt could easily be transferred to the actual baseball to arrive at McGinley's claimed invention. Trial Tr. Vol. 3, pp. 57-58.

Stitt testified that the PTO never rejected McGinley's claims by saying that one could substitute the "elongate finger-shaped markings" shown in Figure 6 of Morgan in place of the "circular dots" in Pratt. Trial Tr. Vol. 3, p. 63. He also pointed out that the PTO could have issued an obviousness rejection of the asserted claims based on a theory of transferring Pratt's phantom lines onto the baseball, but never did so. Trial Tr. Vol. 3, p. 185. Similarly, he testified that the PTO could have issued an obviousness rejection of the asserted claims based on a theory of combining Pratt with Morgan, but never did so either. Trial Tr. Vol. 3, p. 186.

Stitt also testified that he flew to the Patent Office in Washington, D.C., with McGinley for an interview with the Examiner to discuss the differences between Pratt and Morgan and the claimed invention. Trial Tr. Vol. 3, pp. 142-145. Finally, he explained in detail why neither Pratt nor Morgan alone or in combination with each other would provide the claimed "means for orientation." Trial Tr. Vol. 3, pp. 150-52.

In addition, McGinley relied heavily on the presumption of validity to which his patent is entitled by the terms of 35 U.S.C. §282, mainly in the context of Stitt's tutorial concerning how McGinley's patent was prosecuted, and in McGinley's opening statement and closing argument to the jury. As noted above, throughout the trial, McGinley pointed out that both the Pratt and Morgan references were before the examiner who tested McGinley's patent for validity. Indeed, those two references were discussed in an interview between

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the applicant and the examiner. The examiner rejected McGinley's claims as anticipated by Pratt, and made no mention of any concern as to obviousness in view of Pratt alone or of a combination of Pratt and Morgan. The Board of Patent Appeals and Interferences reversed the examiner's anticipation rejection, holding that Pratt failed to teach McGinley's means for orienting the baseball relative to the palm of the hand. In due course, McGinley's patent issued and became clothed with the statutory presumption of validity, with no obviousness challenge having been mounted against it, either on the basis of Pratt alone, or of Pratt in combination with Morgan.

The jury in this case was expressly charged that the patent in suit is entitled to the presumption of validity, and that FSI could only overcome that burden with clear and convincing evidence to the contrary. It is well established in our case law that FSI's burden in this case was especially heavy:

When no prior art other than that which was considered by the PTO examiner is relied on by the attacker [FSI], he has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents. In some cases a PTO board of appeals may have approved the issuance of the patent. *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359, 220 USPQ 763, 770 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 821, 105 S. Ct. 95 (1984).

Perhaps McGinley's best argument to save his claims from prima facie obviousness in the light of Pratt and Morgan is his contention that those references together teach away from their combination. We have noted elsewhere, as a "useful general rule," that references that teach away cannot serve to create a prima facie case of obviousness. *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1131, 1132 (Fed. Cir. 1994). If references taken in combination would produce a "seemingly inoperative device," we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness. *In re Spinnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969) (references teach away from combination if combination produces seemingly inoperative device); *see also In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (inoperable modification teaches away).

McGinley argues in his brief that Pratt itself teaches away from combining the finger orientation of Morgan, because Pratt, by teaching only the placement of finger tips on the baseball, leads away from placing a full finger orientation on the ball. Such may be the case; but we have no assurance that the jury heard that argument. At oral argument in this court, however, FSI confirmed that McGinley argued to the jury that adding the finger marks of Morgan to Pratt's baseball, by "filling in" the phantom marks to create structure that defines orientation as claimed, would require obliteration of the claimed rotation arrows, a feature that is necessary in order to permit the Pratt invention to operate properly. FSI also confirmed at oral argument that the jury heard McGinley's argument that to combine the finger placements of Morgan onto the Pratt ball would also render the Pratt ball inoperable, by eliminating the multi-colored equatorial band, a claimed feature of the Pratt patent also required for successful operation of Pratt's invention.

We are satisfied that McGinley presented sufficient evidence as well to counter FSI's alternative argument that it would have been obvious to place three sets of marks on the Morgan ball in light of the teaching of Pratt. First, a reasonable jury could have determined from examining the Morgan reference that the finger placement indicia on Morgan are too large to allow the inclusion of more than a single set of markings. This point is important, because Morgan expressly requires markings on the ball to accommodate the placement of two full fingers and a thumb to simulate throwing a single pitch. The jury could have certainly concluded that one of ordinary skill would not attempt to place markings for two additional pitches on Morgan's ball. Two more sets of markings as shown by Morgan itself would require markings for two additional sets of fingers and thumbs. On the other hand, two sets of markings as

shown by Pratt would lead to confusion as to the correct means for orientation on Morgan's ball. Any such configurations, *i.e.*, Morgan's invention with markings for throwing three different pitches, would risk, if not achieve, obliteration of the clear and unmistakable markings shown on Morgan's ball to teach the throwing of a single curving pitch. Moreover, a reasonable jury could have considered that all of the embodiments

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described and illustrated in the Morgan reference are expressly limited to teaching a student pitcher to throw a baseball with a "particular curve or break," and that none of the embodiments discuss or suggest using a conventional baseball as opposed to a hollow shell comprising two metallic or plastic hemispheres glued or otherwise bonded together. The jury also could have concluded that Morgan—with its full finger and thumb imprint markings on the ball—teaches away from a means for orientation using the smaller tear-drop markings disclosed by McGinley or the small truncated finger-shaped markings used in FSI's accused baseballs.

Given the strength of the teaching away point, we think it remarkable that FSI makes no attempt whatsoever in its brief to counter McGinley's argument. The jury's verdict that the claims in suit are not obvious is supported by the evidence brought forward by McGinley to resist FSI's contrary evidence. Here we have the classic example of sufficient evidence to support each position argued to the jury. The key issue, namely what the references teach and whether they teach the necessity of combination or the requirement of separation, is a fact issue. When the jury is supplied with sufficient valid factual information to support the verdict it reaches, that is the end of the matter. In such an instance, the jury's factual conclusion may not be set aside by a JMOL order.

Given the multiple bases upon which the jury's verdict in favor of McGinley can be sustained over FSI's arguments for combining the references, we must conclude that FSI fares no better in arguing a combination of Pratt into Morgan than it does in arguing a combination of Morgan into Pratt. The jury was thus entitled to reach its verdict of nonobviousness on the ground that one of ordinary skill in the art would not deem the asserted claims of the '193 patent obvious in light of Pratt and Morgan in combination. That being the case, it is illogical to think that one of ordinary skill in the art would have deemed McGinley's claims obvious in the light of Pratt alone. If one of ordinary skill is not taught by Morgan to extend Pratt's circular markings into the phantom lines, that person would not be taught by the phantom lines alone to do so.

Nonetheless, we think the district court erred as well in its decision that McGinley's asserted claims were obvious as a matter of law in view of Pratt alone. A21-22. According to the district court's reasoning, no reasonable jury could have failed to conclude that an ordinarily skilled artisan would have been motivated to transfer the finger-shaped "phantom lines" shown in the Pratt reference onto the actual Pratt baseball itself, thus providing the missing "means for orientation" that is admittedly otherwise missing in Pratt.

It should be noted that the "phantom lines" shown in Pratt are virtually identical to the finger-shaped markings on Fig. 6 of the Morgan reference, except that the Morgan markings are "filled-in" and actually marked on the ball. Therefore, many of the arguments mentioned above with respect to Morgan apply with equal force with respect to the Pratt phantom lines. Specifically, as FSI conceded at oral argument before this court, the jury heard McGinley's argument that transferring large finger-shaped markings (such as those illustrated in Fig. 6 of Morgan or in the phantom lines of Pratt) would render the Pratt invention inoperable by interfering with the multi-colored equatorial band. Thus, according to this evidence, one of ordinary skill in designing baseballs for use as pitching trainers would not be motivated to modify Pratt by filling in the phantom lines to express palm-oriented finger placement on the ball. As mentioned above, the jury also heard extensive testimony concerning the prosecution history of the '193 patent, including the critical facts that (1) Pratt was before the PTO during the entire pendency of the patent application, and (2) although the PTO continued to reject the asserted claims as anticipated by Pratt until McGinley won an appeal before the Board on that point, the PTO never rejected the asserted claims as obvious in view of Pratt alone. Surely, relying on the presumption of regularity that applies to all administrative agencies such as the PTO, the jury could have reasonably concluded that if the PTO believed that an obviousness rejection based on Pratt alone was warranted, such a rejection would have been promptly made. Also, just as was the case with the Morgan markings, the jury could have reasonably concluded from an examination of the references that the Pratt phantom lines are so large that it would not be feasible to include three sets of them on a single baseball, as required by the asserted claims. Because substantial evidence supports the jury's implicit factual finding that no motivation to modify Pratt in that manner has been demonstrated in this case, the district court's ruling that Pratt alone renders the asserted claims obvious as a matter of law was erroneous.

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Due to the "black box" nature of the jury's verdict, it is impossible to determine which of the above pieces of evidence, alone or in combination, carried the day in the jury room, and how much weight was assigned to each piece. All that can be said with certainty is that—as a whole—the evidence enumerated above (all of which was admittedly before the jury) constitutes substantial evidence to support the jury's verdict. We recognize the concerns of the dissenting opinion that it is difficult to sort out the weight to be given factual determinations in an obviousness inquiry from the degree to which the district court should override permissible found-facts to sum-up the legal conclusion of obviousness *vel non*. But when a dispositive element of the factual equation, here whether to combine or modify key references, so clearly could have been decided by the jury in McGinley's favor, it is not our place to elide the vagaries of a black box jury verdict by overriding the jury's decision. Our law does not compel the use of special verdicts in these cases, and so long as the parties are content to give the jury unfettered room to operate on dispositive factual issues within the scope of a general verdict request, we must be mindful of our role as an appellate court and respect the verdict reached, notwithstanding what may seem to some to be an invention of little novelty.



For the reasons set forth above, we conclude that the district court erred when it ruled on JMOL that no reasonable juror could have ruled that FSI failed to make out a case of obviousness by clear and convincing evidence.

## V

## Denial of McGinley's Motion to Amend Complaint

More than one year after McGinley had filed its initial complaint against FSI in this case, and almost two months after the deadline that had been set by the district court for filing a motion to join additional parties, McGinley sought to add his own company and oral exclusive licensee, S.C. Products, Inc. ("SCP"), as a plaintiff. Apparently, McGinley and SCP are "one and the same," and McGinley is the sole shareholder of SCP. However, in a technical corporate sense, the RCIB was sold by SCP, not by McGinley.

[3] The district court denied McGinley's motion, and articulated the following bases for its decision:

The court, in its May 10, 1999 telephone conference, found that both parties have been equally dilatory in preparing this case for trial, and therefore denied the plaintiff's motion for an extension of the deadline to file amended pleadings. The plaintiff's current motion to amend comes nearly two months after the deadline for such motions. The court believes that, had the plaintiff diligently sought to bring the matter to trial, the plaintiff could have brought this motion to amend within the deadline specified in the scheduling order. For example, the plaintiff did not complete depositions of defendant and its representatives—the very depositions on which he in part bases his motion to amend—until the week of May 17, 1999, some six weeks after the deadline for motions to amend.

A district court's decision to grant or deny a motion to leave to join a party involves a procedural question that raises no special issues relating to patent law, and therefore Tenth Circuit law applies in this case. *Sun-Tek Indus., Inc. v. Kennedy Sky Lites, Inc.*, 856 F.2d 173, 175, 8 USPQ2d 1154, 1156 (Fed. Cir. 1988). In the Tenth Circuit, this issue is reviewed for an abuse of discretion. *Scheufler v. Gen. Host Corp.*, 126 F.3d 1261, 1270 (10th Cir. 1997). In this case, we can safely conclude that the district court did not abuse its discretion. Trial courts are given broad latitude in managing and scheduling cases, and therefore the stated bases for the district court's decision to deny McGinley's motion are entirely reasonable. See *Fonan v. Davis*, 371 U.S. 178, 182 (1962) (stating that undue delay may form a proper basis for a court to exercise its discretion to deny a plaintiff's motion to amend its complaint).

## VI

## Denial of FSI's Motion for New Trial on Willfulness

FSI argued at trial that it did not willfully infringe the '193 patent on the basis that it allegedly had a reasonable, good faith belief that the patent was invalid. FSI did not rely upon advice of counsel to demonstrate this belief. Instead, FSI sought to demonstrate its good faith belief through the testimony of its corporate representative and vice president of marketing, Charles Quinn, who was to testify as to FSI's understanding of the Pratt and Morgan patents. At trial, the district court prevented Quinn from testifying as an ordinarily skilled artisan in the invalidity portion of the

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trial, since he was not qualified as an expert under Federal Rule of Civil Procedure 26.

After the jury verdict, along with its motion for JMOL of invalidity, FSI argued in the alternative that it was entitled to a new trial on willfulness, without citing any particular basis for granting the motion, other than referring to evidence presented at trial tending to show that FSI's infringement was not willful. In its briefs on appeal, FSI argues for the first time that it is entitled to a new trial because it was denied a fair opportunity to present its allegedly "key piece of exculpatory evidence" at trial (i.e., Quinn's testimony as to FSI's understanding that the '193 patent was invalid in view of Pratt and Morgan). The district court denied the motion for a new trial on willfulness, stating as follows:

[E]ven if the Federal Circuit were to reverse this court on its JMOL determination, the jury's willfulness finding should not be set aside nor should defendant be entitled to a new trial. The crux of this opinion is that the '193 patent is obvious as a matter of law; if the court is deemed to be incorrect in that conclusion, that is, if there actually was a question of fact for the jury on obviousness, then, as plaintiff discusses in his responsive papers, the evidence presented supports the jury's conclusion that the infringement was willful and, also, the verdict was not so contrary to the weight of that evidence as to mandate a new trial.

The denial of FSI's motion for a new trial is a procedural issue not unique to patent law, and is therefore reviewed in this case under the Tenth Circuit's abuse of discretion standard. *Smith v. Ingersoll-Rand Co.*, 214 F.3d 1235, 1242 (10th Cir. 2000); accord *Shearing v. Iolab Corp.*, 975 F.2d 1541, 1544, 24 USPQ2d 1133, 1136 (Fed. Cir. 1992).

[4] We conclude that the district court did not abuse its discretion in denying FSI's motion for a new trial. Because FSI failed to make any offer of proof under Rule 103 of the Federal Rules of Evidence, nothing in the record indicates what Quinn would have said on

the stand if asked. *Sorensen v. City of Aurora*, 984 F.2d 349, 355 (10th Cir. 1993) (finding no abuse of discretion in denying new trial where party failed to establish sufficient factual record for appellate court to consider propriety of excluding testimony). Moreover, we are satisfied that—even without being allowed to present Quinn's allegedly exculpatory evidence—FSI took advantage of its fair opportunity to present evidence concerning FSI's independent development of the accused 2705 baseball and its alleged acts of good faith to the jury.

## VII

### Conclusion

For the reasons stated above, we reverse the grant of JMOL in favor of FSI and order the jury's verdict reinstated. We leave undisturbed, however, the district court's other judgments, rulings, and orders on appeal, thereby affirming the remaining questions raised by McGinley and the cross-appeals presented by FSI. The case is returned to the district court for further proceedings not inconsistent with this opinion.

### Costs

No costs.

### REVERSED-IN-PART AND AFFIRMED-IN-PART

### Footnotes

<sup>1</sup> We note that the district court incorrectly referred to "plaintiff's product" repeatedly in its memorandum and order granting summary judgment of infringement, where "plaintiff's asserted claims" were clearly meant to be referenced instead. *See, e.g., McGinley II* at 1224. Upon reviewing the record, we conclude that these erroneous statements were harmless, since there is no contention by any party that any significant differences exist between McGinley's commercial embodiment ("the RCIB") and relevant aspects of the asserted claims.

<sup>2</sup> We interpret this statement as referring solely to the asserted claims.

### Dissenting Opinion Text

#### Dissent By:

Michel, J., dissenting.

Because I conclude that the Pratt patent, alone, renders the patented invention obvious as a matter of law, I would affirm. I am especially troubled by the implication I see in the majority's opinion that a general jury verdict on the legal question of obviousness is essentially immune from review by the trial court on JMOL, or by this court on appeal.

The issue presented in this appeal derives from the common, if unfortunate, practice of allowing the jury to render a general verdict on the ultimate legal conclusion of obviousness without requiring express findings on the underlying factual issues through a special verdict or special interrogatories under Fed. R. Civ. P. 49. Nevertheless, since the inception of our court, we have recognized that a court may submit this legal question to a jury and that doing so by general verdict rather than by Rule 49 is not ordinarily an abuse of discretion. *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 1515, 220 USPQ 929, 937 (Fed. Cir. 1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1547-48, 220 USPQ 193, 197 (Fed. Cir. 1983). We have emphasized, however, that "[t]here is no question that the judge must remain the ultimate arbiter on the question of obviousness." *Railroad Dynamics*, 727 F.2d at 1515, 220 USPQ at 937; *see also Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479, 44 USPQ2d 1181, 1183 (Fed. Cir. 1997) ("That an obviousness determination

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stands upon the relevant facts of the case does not convert the ultimate conclusion of obviousness from one of law into one of fact.").

The difficulty presented in this appeal is how to separate the role of the jury to find facts (with these findings binding on this court, as well as the trial court, so long as they are supported by at least substantial evidence) from the role of trial judges in reaching, or for us freely reviewing, the ultimate legal conclusion of obviousness, *vel non*. In this case, the verdict form tells us only that the jury found the claimed invention nonobvious in light of Pratt and/or Morgan, with no identification of the jury's resolution of genuine disputes over material factual issues. We must therefore imply such factual findings, under the legal presumption that the jury found all facts necessary to support its verdict in favor of McGinley. *Railroad Dynamics*, 727 F.2d at 1516, 220 USPQ at 937 ("[W]hen a jury returns a general verdict, the law presumes the existence of fact findings implied from the jury's having reached that verdict.").

When faced with a general verdict of nonobviousness or obviousness, the categories of facts the court must imply concern the scope and content of prior art; what a prior art reference teaches; the differences between the claimed invention and the prior art; the level of

ordinary skill in the prior art; and objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 14, 148 USPQ 459, 467 (1966); *Tec Air, Inc. v. Denso Mfg. Michigan Inc.*, 192 F.3d 1353, 1359, 52 USPQ2d 1294, 1298 (Fed. Cir. 1999). In cases such as this where a single prior art reference is alleged to render the claimed invention obvious, there must be a sufficient showing of a suggestion or motivation for any modification of the teachings of that reference necessary to reach the claimed invention in order to support the obviousness conclusion. *Sibia Neuroscis., Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1356, 55 USPQ2d 1927, 1931 (Fed. Cir. 2000); *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996). This suggestion or motivation may be derived from the prior art reference itself, from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. *Sibia*, 225 F.3d at 1356, 55 USPQ2d at 1931.

While the trial court must defer to the jury's factual findings, actual or implied, the court nonetheless has the duty, when presented with a motion for JMOL following a general verdict on obviousness, to review the factual findings for substantial evidentiary support, and the ultimate conclusion on obviousness for legal correctness. *Railroad Dynamics*, 727 F.2d at 1513, 220 USPQ at 936 ("The moving party is entitled to JNOV when the court is convinced: (1) that reasonable persons could not in light of that evidence have found the facts necessary to support the jury's verdict; or (2) that the facts properly found cannot in law support that verdict."). In the present case, the trial court dutifully performed this analysis, citing our precedent, and concluded that no reasonable jury could find that Pratt did not render McGinley's claimed baseball obvious. I agree.

The only arguable difference between Pratt's and McGinley's claimed marked baseballs for student pitchers is that Pratt purportedly lacks a "means for indicating the orientation of the baseball relative to the palm of the hand," a limitation separately claimed by McGinley. U.S. Patent No. 5,407,193, col. 5, ll. 41-42. There has been no admission, as the majority suggests, that Pratt does not disclose a "means for orienting." The structures corresponding to this means-plus-function limitation in McGinley's claimed baseball are sets of finger markings, shaped like tapered eggs, with the direction of the taper indicating the proper orientation of the ball in the pitcher's hand. That is, the points of the tapers, by extension, lead approximately to the center of the palm. The fingertip placement markings illustrated in Pratt's diagrams, by contrast, are simple circles with no taper, and thus do not point toward the palm.

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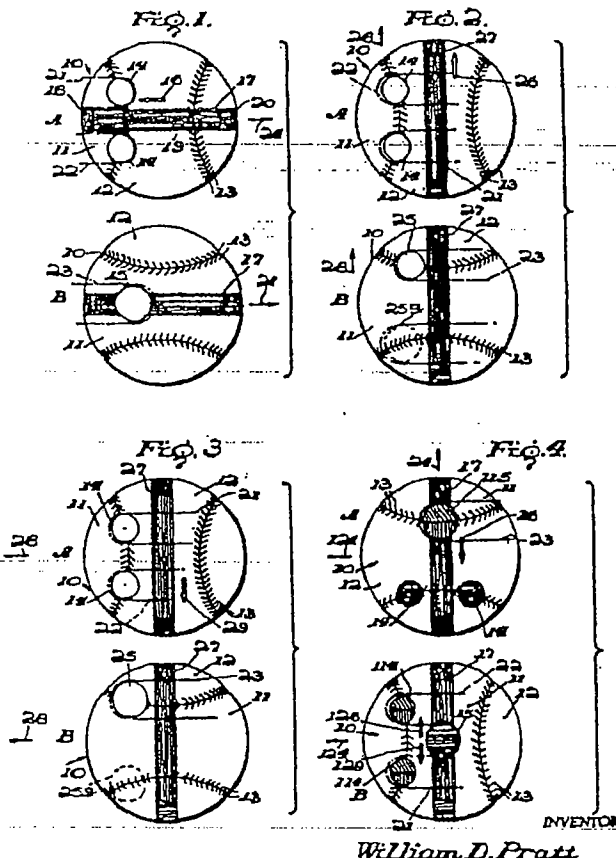
Feb. 16, 1960

W. D. PRATT

2,925,273

BASEBALL TRAINING AID

Filed April 25, 1968



The jury did indeed hear testimony to the effect that Pratt's rounded fingertip placement indicia would leave a student pitcher confused as to how to grip the ball, as the pitcher would be unsure whether to grip the ball on only one of its hemispheres, or rather to grasp the

ball fully across its equator. Mr. Richard Stitt, the attorney who prosecuted the '193 patent, testified that the symmetry of Pratt's fingertip markings would frustrate gripping the ball "cause if the opposite side of that ball looks the same as the side we're looking at, you don't know which to approach it from, and that's a critical question." Trial Tr., Vol. 3, p. 201. Contrarily, Mr. Stitt testified that "if we had a — a taper on one end of this circle, I would know to approach the ball." Trial Tr. Vol. 3, p. 218.

Such testimony, in my view, is a nullity because it contradicts the teachings of the Pratt patent, which by its very markings necessarily discloses a means for orienting a pitcher's fingers on the ball "relative to the palm." As illustrated here, Pratt's diagrams show multiple sets of fingertip placement indicia, with a single set comprising two circles situated near

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each other (described in the specification as markers for the pitcher's forefinger and second finger) and a third spot somewhat removed from the other two (described as a marker for the thumb). As a matter of geometry, there are only two ways for a pitcher to place his or her thumb, forefinger, and second finger on these three spots (barring finger-crossing). One way is to pinch the near hemisphere of the baseball with one's fingertips. The other way is to grasp the ball near the palm of one's hand, wrapping one's fingers across the equator of the ball (i.e., the way a baseball is always thrown).

Pratt's written description tells us that people of ordinary skill in this art (and student pitchers) know generally how to hold and throw baseballs. The patent states that, for a fastball, the ball is thrown with "the usual forearm motion." U.S. Patent No. 2,925,273, col. 2, ll. 25-26. A fingertip grip on only one hemisphere of the ball would be unworkable, as for a curveball, the patent recites using a "tighter grip," and throwing the ball with a "conventional wrist snap," so as to impart a "maximum spin" to the ball. *Id.* at col. 2, ll. 53-54. To do so, the forefinger and second finger must "extend across two sections of the stitches of the seam," such that the thumb "extends along the seam." *Id.* at col. 2, ll. 50-52. These instructions, read in view of the finger placement indicia, reduce the number of possible palm orientations to one: the ball-in-palm grip. Because Mr. Stitt's testimony contradicts the express teachings of Pratt, his testimonial evidence is entitled to no weight. I conclude that the express teachings of Pratt, as a matter of law, disclose to persons of ordinary skill a means for orienting the ball in the pitcher's palm.

Of course, in the context of a means-plus-function claim, the invalidating prior art must disclose not simply a means for achieving the desired function, but rather the *particular structure* recited in the written description corresponding to that function, or an equivalent thereof. *In re Donaldson Co., Inc.*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1849 (Fed. Cir. 1994). To this end, the Pratt patent discloses more than just circular fingertip markings, as his diagrams also display "phantom lines" (which do not appear on the actual ball covered by the patent) extending tangentially from the fingertip placement circles in the direction that a pitcher's fingers should be placed. FSI argues here, as below, that these phantom lines would have taught skilled artisans to extend tangentially Pratt's circular markings to give them directionality.

At trial, Mr. Stitt discounted the importance of these phantom lines, testifying that "[t]hey don't have anything to do with the invention." Trial Tr. Vol. 3, p. 183. This remark was legally incorrect, because although the phantom lines do not appear on Pratt's patented ball, they do comprise part of Pratt's disclosure. *See In re Fritch*, 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1782 (Fed. Cir. 1992) ("It is well settled that a prior art reference is relevant for all that it teaches to those of ordinary skill in the art."). McGinley also argues in his briefing that adopting the phantom lines from Pratt would be unworkable, because these lines would be too long and would obscure other markings on the baseball. The majority accepts this argument. But absolutely no trial testimony — none — suggests that Pratt's phantom lines are too long, or that their length as shown in the drawings would have dissuaded a skilled artisan from shortening the finger placement indicia as necessary to avoid obscuring any other markings. Mere attorney argument is no substitute for evidence of record. To support its holding (and its statement that the issue of motivation to modify Pratt's lines into McGinley's tapers "so clearly could have been decided by the jury in McGinley's favor"), the majority combines testimony discussing the elongated finger grooves from Morgan with the testimony concerning the circular fingertip placement markings of Pratt. But by importing testimony regarding Morgan into its Pratt analysis, the majority appears to contradict its own holding that these references are not combinable. Moreover, putting aside the lack of evidence on this point, it hardly matters that the phantom lines as shown are longer than they need be if they were actually drawn onto the ball. An artisan need not copy the lines precisely as shown, but instead would know to optimize the length of the lines to fit the constraints of the other marking on the ball. *See In re Baird*, 16 F.3d 380, 383, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) ("[A] reference must be considered not only for what it expressly teaches, but also for what it fairly suggests.") (quoting *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979)). Such a design variation would be routine in the baseball design art.

Presumably, the jury found that the phantom lines depicted in Pratt's diagrams would not have motivated a reasonable artisan to elaborate on Pratt's circular fingertip placement indicia and break their symmetry. However,

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the only trial testimony supportive of this finding — i.e., Stitt's comment that the phantom lines have nothing to do with the invention — is legally incorrect. Aside from this remark, and testimony concerning the Morgan patent (which the majority finds to be non-analogous), there is simply no evidence, let alone substantial evidence, in support of the jury's implicit finding. Moreover, this implicit finding is contradicted by the disclosures of Pratt, itself. Pratt clearly contemplated the possibility that the reader of his patent might not immediately appreciate the proper orientation of a pitcher's fingers — that is why he added the phantom lines to his drawings. By including these lines in his disclosure, Pratt imposed directionality on his circular markings in the drawings and

necessarily communicated to those in his field a suggestion for reshaping the circular finger placement indicia accordingly. To the extent the jury's implicit findings are to the contrary, I find them unsupported by substantial evidence and contrary to Pratt's express and graphic disclosures. To the extent the jury rested its conclusion on such findings, it was legally incorrect.

It is true that the jury found that the Pratt patent does not anticipate McGinley's invention. I do not dispute that the differences between Pratt's circular indicia and McGinley's tapered, egg-shaped indicia, may be sufficient to support the jury's non-anticipation verdict. But obviousness is different. It remains the province of the court to determine, whether in light of all the facts properly, if only implicitly, found by the jury, the claimed invention would have been obvious. *Richardson-Vicks*, 122 F.3d at 1479, 44 USPQ2d at 1183; *Railroad Dynamics*, 727 F.2d at 1515, 220 USPQ at 937. We of course must view all supportable facts as found in favor of McGinley, the verdict winner and non-movant. But it is undeniable (by looking at Pratt's placement of the circular markings, and the accompanying written description) that Pratt discloses a means for orienting a pitcher's fingers around the ball "relative to the palm." Moreover, the phantom lines suggest altering Pratt's circular markings to provide them with directionality, and to break the symmetry of the circular fingertip indicia. I acknowledge that there are differences between the scope and content of the prior art and the claimed invention. But this is where the legal analysis, as opposed to the fact analysis, begins. It is the role of the court to assess whether in light of these differences and the suggestion to modify the teachings of Pratt, the claimed invention would have been obvious. Viewing all these factual considerations in context, I cannot shake the conviction that a ball designer of even minimal skill in the art would have found it blatantly obvious to modify Pratt's circles (with their phantom lines), and reshape them into tapered eggs. Nor do McGinley's purportedly fabulous sales change my conclusion, because there is no evidence that these sales are due to the markings on the ball, as opposed to Roger Clemens' endorsement, or advertising. Accordingly, I conclude that McGinley's patent was proven invalid for obviousness.

I am concerned about far more important effects of today's ruling than whether McGinley's patent, although invalid, stands to menace still other baseball competitors. Rather, I am concerned that after reading the majority opinion, trial courts and our panels will hereafter consider such general verdicts on obviousness immune from meaningful review and that serious legal errors by juries will thus go uncorrected. The result will be that defective patents will remain to threaten all competitors in an industry. Indeed, I think today's appeal represents just such a case. More may follow. It is rare to see such a compelling case of obviousness, and yet more surprising to find our supposedly de novo review so limited, despite our settled case law that a jury's ultimate conclusion on obviousness is a legal question freely reviewable by judges. I therefore respectfully dissent.

- End of Case -

FULL TEXT OF CASES (USPQ2D)  
Cases Publishing the Week of Feb 11, 2002  
In re Lee, 61 USPQ2d 1430 (CA FC 2002)

In re Lee, 61 USPQ2d 1430 (CA FC 2002)  
**61 USPQ2D 1430**  
**In re Lee**  
**U.S. Court of Appeals Federal Circuit**

No. 00-1158  
Decided January 18, 2002

Headnotes

PATENTS

[1] Practice and procedure in Patent and Trademark Office — Board of Patent Appeals and Interferences — In general  
(§110.1101)

Patentability/Validity — Obviousness — Combining references (§115.0905)

Patentability/Validity — Obviousness — Evidence of (§115.0906)

Rejection of patent application for obviousness under 35 U.S.C. §103 must be based on evidence comprehended by language of that section, and search for and analysis of prior art includes evidence relevant to finding of whether there is teaching, motivation, or suggestion to select and combine references relied on as evidence of obviousness; factual inquiry whether to combine references must be thorough and searching, based on objective evidence of record, and Board of Patent Appeals and Interferences must explain reasons why one of ordinary skill in art would have been motivated to select references and to combine them to render claimed invention obvious.

[2] Patentability/Validity — Obviousness — Combining references

JUDICIAL PRACTICE AND PROCEDURE

Procedure — Judicial review — Standard of review — Patents (§410.4607.09)

Board of Patent Appeals and Interferences improperly relied upon “common knowledge and common sense” of person of ordinary skill in art to find invention of patent application obvious over combination of two prior art references, since factual question of motivation to select and combine references is material to patentability, and could not be resolved on subjective belief and unknown authority, since deferential review of agency decisions under Administrative Procedure Act reinforces obligation of board to develop evidentiary basis for its findings, since board's rejection of need for any specific hint or suggestion in particular reference to support combination constituted omission of relevant factor required by precedent, and thus was both legal error and arbitrary agency action, since board's findings must extend to all material facts and be documented on record, and since “common knowledge and common sense” are not specialized knowledge and expertise of agency contemplated by APA, and may not be substituted for evidence, although they may be applied to analysis of evidence.

## PATENTS

[3] Practice and procedure in Patent and Trademark Office — Board of Patent Appeals and Interferences — In general (§110.1101)

Patentability/Validity — Obviousness — Evidence of (§115.0906)

## JUDICIAL PRACTICE AND PROCEDURE

Procedure — Judicial review — Standard of review — Patents (§410.4607.09)

Patent examiners and Board of Patent Appeals and Interferences, in relying on what they assert to be general knowledge to negate patentability on ground of obviousness, must articulate that knowledge and place it on record, since examiners and board are presumed

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to act from viewpoint of person of ordinary skill in art in finding relevant facts, assessing significance of prior art, and making ultimate determination of obviousness issue; failure to do so is not consistent with either effective administrative procedure or effective judicial review, and board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth rationale on which it relies.

[4] Procedure — Court of Appeals for the Federal Circuit (§410.03)

Procedure — Judicial review — Standard of review — Patents (§410.4607.09)

U.S. Court of Appeals for the Federal Circuit will not consider proposed alternative grounds for affirming decision of Board of Patent Appeals and Interferences rejecting patent application for obviousness, since alternative grounds were made at oral argument and constitute post hoc rationalization for agency action, consideration of which would deprive aggrieved party of fair opportunity to support its position.

## Case History and Disposition

Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and

Patent application of Sang-Su Lee, serial no. 07/631,210, directed to method of automatically displaying functions of video display device and demonstrating how to select and adjust functions to facilitate user response. Applicant appeals from decision upholding rejection of all claims for obviousness, and from reaffirmation of that decision on reconsideration. Reversed and remanded.

## Attorneys:

Richard H. Stern and Robert E. Bushnell, Washington, D.C., for Sang Su Lee.

Sidney O. Johnson Jr., associate solicitor, John M. Whealan, solicitor, and Raymond T. Chen, Maximilian R. Peterson, and Mark Nagumo, associate solicitors, Arlington, Va., for Director of U.S. Patent and Trademark Office.

## Judge:

Before Newman, Clevenger, and Dyk, circuit judges.

## Opinion Text

## Opinion By:

Newman, J.

Sang-Su Lee appeals the decision of the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office, rejecting all of the claims of Lee's patent application Serial No. 07/631,210 entitled "Self-Diagnosis and Sequential-Display Method of Every Function." We vacate the Board's decision for failure to meet the adjudicative standards for review under the Administrative Procedure Act, and remand for further proceedings.

*The Prosecution Record*

Mr. Lee's patent application is directed to a method of automatically displaying the functions of a video display device and demonstrating how to select and adjust the functions in order to facilitate response by the user. The display and demonstration are achieved using computer-managed electronics, including pulse-width modulation and auto-fine-tuning pulses, in accordance with procedures described in the specification. Claim 10 is representative:

- 10- A method for automatically displaying functions of a video display device, comprising:
- determining if a demonstration mode is selected;
  - if said demonstration mode is selected, automatically entering a picture adjustment mode having a picture menu screen displaying a list of a plurality of picture functions; and
  - automatically demonstrating selection and adjustment of individual ones of said plurality of picture functions. The examiner rejected the claims on the ground of obviousness, citing the combination of two references: United States Patent No. 4,626,892 to Nortrup, and the Thunderchopper Helicopter Operations Handbook for a video game. The Nortrup reference describes a television set having a menu display by which the user can adjust various picture and audio functions; however, the Nortrup display does not include a demonstration of how to adjust the functions. The Thunderchopper Handbook describes the Thunderchopper game's video display as having a "demonstration mode" showing how to play the game; however, the Thunderchopper Handbook makes no mention of the adjustment of picture or audio functions. The examiner held that it

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would have been obvious to a person of ordinary skill to combine the teachings of these references to produce the Lee system. Lee appealed to the Board, arguing that the Thunderchopper Handbook simply explained how to play the Thunderchopper game, and that the prior art provided no teaching or motivation or suggestion to combine this reference with Nortrup, or that such combination would produce the Lee invention. The Board held that it was not necessary to present a source of a teaching, suggestion, or motivation to combine these references or their teachings. The Board stated:

The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. Board op. at 7. The Board did not explain the "common knowledge and common sense" on which it relied for its conclusion that "the combined teachings of Nortrup and Thunderchopper would have suggested the claimed invention to those of ordinary skill in the art."

Lee filed a request for reconsideration, to which the Board responded after five years. The Board reaffirmed its decision, stating that the Thunderchopper Handbook was "analogous art" because it was "from the same field of endeavor" as the Lee invention, and that the field of video games was "reasonably pertinent" to the problem of adjusting display functions because the Thunderchopper Handbook showed video demonstrations of the "features" of the game. On the matter of motivation to combine the Nortrup and Thunderchopper references, the Board stated that "we maintain the position that we stated in our prior decision" and that the Examiner's Answer provided "a well reasoned discussion of why there is sufficient motivation to combine the references." The Board did not state the examiner's reasoning, and review of the Examiner's Answer reveals that the examiner merely stated that both the Nortrup function menu and the Thunderchopper demonstration mode are program features and that the Thunderchopper mode "is user-friendly" and it functions as a tutorial, and that it would have been obvious to combine them.

Lee had pressed the examiner during prosecution for some teaching, suggestion, or motivation in the prior art to select and combine the references that were relied on to show obviousness. The Examiner's Answer before the Board, plus a Supplemental Answer, stated that the combination of Thunderchopper with Nortrup "would have been obvious to one of ordinary skill in the art since the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software," and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial." The Board adopted the examiner's answer, stating "the examiner has provided a well reasoned discussion of these references and how the combination of these references meets the claim limitations." However, perhaps recognizing that the examiner had provided insufficient justification to support combining the Nortrup and Thunderchopper references, the Board held, as stated *supra*, that a "specific hint or suggestion" of motivation to combine was not required.

This appeal followed.

#### Judicial Review

Tribunals of the PTO are governed by the Administrative Procedure Act, and their rulings receive the same judicial deference as do tribunals of other administrative agencies. *Dickinson v. Zurko*, 527 U.S. 150, 50 USPQ2d 1930 (1999). Thus on appeal we review a PTO Board's findings and conclusions in accordance with the following criteria:

5 U.S.C. § 706(2) The reviewing court shall—

(2) hold unlawful and set aside agency actions, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

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(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the



record of an agency hearing prescribed by statute;

For judicial review to be meaningfully achieved within these strictures, the agency tribunal must present a full and reasoned explanation of its decision. The agency tribunal

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must set forth its findings and the grounds thereof, as supported by the agency record, and explain its application of the law to the found facts. The Court has often explained:

The Administrative Procedure Act, which governs the proceedings of administrative agencies and related judicial review, establishes a scheme of "reasoned decisionmaking." Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational. *Allentown Mack Sales and Service, Inc. v. National Labor Relations Bd.*, 522 U.S. 359, 374 (1998) (citation omitted). This standard requires that the agency not only have reached a sound decision, but have articulated the reasons for that decision. The reviewing court is thus enabled to perform meaningful review within the strictures of the APA, for the court will have a basis on which to determine "whether the decision was based on the relevant factors and whether there has been a clear error of judgment." *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971). Judicial review of a Board decision denying an application for patent is thus founded on the obligation of the agency to make the necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions. See *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001) (review is on the administrative record); *In re Gariside*, 203 F.3d 1305, 1314, 53 USPQ2d 1769, 1774 (Fed. Cir. 2000) (Board decision "must be justified within the four corners of the record").

[1] As applied to the determination of patentability *vel non* when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. §103 must be based on evidence comprehended by the language of that section." *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983). The essential factual evidence on the issue of obviousness is set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the *Graham* factors).

"The factual inquiry whether to combine references must be thorough and searching." *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'" (quoting *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998))); *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("teachings of references can be combined *only* if there is some suggestion or incentive to do so.") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).

The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination).

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In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

[2] With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration

mode is user friendly and its functions: "tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.

Deferential judicial review under the Administrative Procedure Act does not relieve the agency of its obligation to develop an evidentiary basis for its findings. To the contrary, the Administrative Procedure Act reinforces this obligation. *See, e.g., Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983) ("the agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.") (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)); *Securities & Exchange Comm'n v. Chenery Corp.*, 318 U.S. 80, 94 (1943) ("The orderly function of the process of review requires that the grounds upon which the administrative agency acted are clearly disclosed and adequately sustained.").

In its decision on Lee's patent application, the Board rejected the need for "any specific hint or suggestion in a particular reference" to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action. *See Motor Vehicle Manufacturers*, 463 U.S. at 43 ("an agency rule would be arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem"); *Mullins v. Department of Energy*, 50 F.3d 990, 992 (Fed. Cir. 1995) ("It is well established that agencies have a duty to provide reviewing courts with a sufficient explanation for their decisions so that those decisions may be judged against the relevant statutory standards, and that failure to provide such an explanation is grounds for striking down the action."). As discussed in *National Labor Relations Bd. v. Ashkenazy Property Mgt. Corp.*, 817 F.2d 74, 75 (9th Cir. 1987), an agency is "not free to refuse to follow circuit precedent."

The foundation of the principle of judicial deference to the rulings of agency tribunals is that the tribunal has specialized knowledge and expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency's application of its knowledge in its area of expertise. Reasoned findings are critical to the performance of agency functions and judicial reliance on agency competence. *See Baltimore and Ohio R.R. Co. v. Aberdeen & Rockfish R.R. Co.*, 393 U.S. 87, 91-92 (1968) (absent reasoned findings based on substantial evidence effective review would become lost "in the haze of so-called expertise"). The "common knowledge and common sense" on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. This court explained in *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697, that "deficiencies of the cited references cannot be remedied by

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the Board's general conclusions about what is 'basic knowledge' or 'common sense.'" The Board's findings must extend to all material facts and must be documented on the record, lest the "haze of so-called expertise" acquire insulation from accountability. "Common knowledge and common sense," even if assumed to derive from the agency's expertise, do not substitute for authority when the law requires authority. *See Allentown Mack*, 522 U.S. at 376 ("Because reasoned decisionmaking demands it, and because the systemic consequences of any other approach are unacceptable, the Board must be required to apply in fact the clearly understood legal standards that it enunciates in principle ....")

The case on which the Board relies for its departure from precedent, *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969), indeed mentions "common knowledge and common sense," the CCPA stating that the phrase was used by the Solicitor to support the Board's conclusion of obviousness based on evidence in the prior art. *Bozek* did not hold that common knowledge and common sense are a substitute for evidence, but only that they may be applied to analysis of the evidence. *Bozek* did not hold that objective analysis, proper authority, and reasoned findings can be omitted from Board decisions. Nor does *Bozek*, after thirty-two years of isolation, outweigh the dozens of rulings of the Federal Circuit and the Court of Customs and Patent Appeals that determination of patentability must be based on evidence. This court has remarked, in *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1356, 51 USPQ2d 1415, 1421 (Fed. Cir. 1999), that *Bozek*'s reference to common knowledge "does not in and of itself make it so" absent evidence of such knowledge.

[3] The determination of patentability on the ground of unobviousness is ultimately one of judgment. In furtherance of the judgmental process, the patent examination procedure serves both to find, and to place on the official record, that which has been considered with respect to patentability. The patent examiner and the Board are deemed to have experience in the field of the invention; however, this experience, insofar as applied to the determination of patentability, must be applied from the viewpoint of "the person having ordinary skill in the art to which said subject matter pertains," the words of section 103. In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the examiner and the Board are presumed to act from this viewpoint. Thus when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.

### Alternative Grounds

[4] At oral argument the PTO Solicitor proposed alternative grounds on which this court might affirm the Board's decision. However, as stated in *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962), "courts may not accept appellate counsel's *post hoc* rationalization for agency action." Consideration by the appellate tribunal of new agency justifications deprives the aggrieved party of a fair opportunity to support its position; thus review of an administrative decision must be made on the grounds relied on by the agency. "If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis." *Securities & Exchange Comm'n v. Chenery Corp.*, 332 U.S. 194, 196 (1947). As reiterated in *Federal Election Comm'n v. Akins*, 524 U.S. 11, 25 (1998), "If a reviewing court agrees that the agency misinterpreted the law, it will set aside the agency's action and remand the case — even though the agency (like a new jury after a mistrial) might later, in the exercise of its lawful discretion, reach the same result for a different reason." Thus we decline to consider alternative grounds that might support the Board's decision.

### Further Proceedings

Sound administrative procedure requires that the agency apply the law in accordance with statute and precedent. The agency tribunal must make findings of relevant facts, and present its reasoning in sufficient detail that the court may conduct meaningful review of the agency action. In *Radio-Television News Directors Ass'n v. FCC*, 184 F.3d 872 (D.C.

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Cir. 1999) the court discussed the "fine line between agency reasoning that is 'so crippled as to be unlawful' and action that is potentially lawful but insufficiently or inappropriately explained," quoting from *Checkosky v. Securities & Exch. Comm'n*, 23 F.3d 452, 464 (D.C. Cir. 1994); the court explained that "[i]n the former circumstance, the court's practice is to vacate the agency's order, while in the latter the court frequently remands for further explanation (including discussion of the relevant factors and precedents) while withholding judgment on the lawfulness of the agency's proposed action." *Id.* at 888. In this case the Board's analysis of the Lee invention does not comport with either the legal requirements for determination of obviousness or with the requirements of the Administrative Procedure Act that the agency tribunal set forth the findings and explanations needed for "reasoned decisionmaking." Remand for these purposes is required. See *Overton Park*, 401 U.S. at 420-221 (remanding for further proceedings appropriate to the administrative process).

VACATED AND REMANDED

### Footnotes

<sup>1</sup> *Ex parte Lee*, No. 1994-1989 (Bd. Pat. App. & Int. Aug. 30, 1994; on reconsid'n Sept. 29, 1999).

- End of Case -

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## **XII. RELATED PROCEEDINGS APPENDIX PAGES**

None.